Colibri Grande PRO

User's manual

09.05.2011

OVERVIEW

FEATURES

These DVR adapt H.264 video encoding for 4 or 8 channel inputs and G.723 audio encoding in order to store and replay.

- User friendly GUI and easy to install
- Various recording modes (Motion, sensor, scheduled recording)
- Mass storage hard disk backup through high-speed USB2.0 and eSATA.
- 4/8CH Composite Input through RJ45 or BNC connectors
- Mobile viewer for Smartphone
- Talk function for two way communication
- Triplex (Recording, Playback, Networking)
- Supplying DC12V power for camera
- Spot monitor for Public view support
- Web monitoring, Remote client SW, Remote setup
- Easy to control of the PTZ camera
- USB Mouse operation
- E-mail notification
- Abnormal shutdown detection and system auto recovery
- High quality and high performance

Specifications – GRM Series

Specification		8Channel	4Channel
LCD	Inch / Resolution	17" / SXGA, 22" / WSXGA+	17" / SXGA
Main display	Live Speed	NTSC : 240fps, PAL : 200fps	NTSC : 120fps, PAL : 100fps
Video In	No. of Channel	8 X RJ-45, 8 X BNC	4 X RJ-45, 4 X BNC
Video Out	Monitor out	Composite (BNC), S-Video (4pin Mini DIN)	Composite (BNC)
	Spot Out	1 CH Composite (BNC)	
Audio (Option)	In / Out / Speaker	IN: 8CH / OUT: - / Built-in	IN: 4CH / OUT: - / Built-in
	Talk Output	Selectable Output: 8CH(RJ45)	Selectable Output: 4CH(RJ45)
Alarm	Input / Output	8 Input, 2 Output (Relay)	4 Input, 1 Output (Relay)
Control Device		Remote Controller / USB Mouse / Network	
Screen	Division / Interface	1,4,6,8,9,Sequence/ Graphic User Interface	1,4,Sequence/ Graphic User Interface
Video Record	Format	NTSC / PAL Auto detection (Signal check)	
	Video CODEC	H.264	
	Recording Resolution	CIF (352X240 / 352X288) 240fps / 200fps	CIF (352X240 / 352X288) 120fps / 100fps
		HALF D1 (704X240 / 704X288) 240fps / 200fps	HALF D1 (704X240 / 704X288) 120fps / 100fps
		D1 (704X480 / 704X576) 120fps / 100fps	D1 (704X480 / 704X576) 120fps / 100fps
	Quality / Event type	Best, High, Normal, Low / Timer, Motion, Sensor	
	Frame Rate	NTSC: 30fps / 15fps / 10fps / 7fps / 5fps / 3fps / 2fps / 1fps PAL: 25fps / 13fps / 8fps / 6fps / 4fps / 3fps / 2fps / 1fps	
System Functions		Abnormal Off detection, Auto recovery, Event log file, USB or Network F/W Update	
Storage	Type / Capacity	HDD(S-ATA) / No limited	
	Mode	Write once / Overwriting	
Motion detect	Resolution / Sensitivity	44X30 Grid / 5 Steps	
Event	Source	Sensor In, Motion detection, Video Loss, HDD Event	
	Action	Recording, Relay out, E-mail notification, Log file, Remote, Buzzer output, Pop Up	
PTZ	Signal type	RS-485	
Backup	Device / Format	eSATA, USB interfaced storage, Network / Watermarking, AVI Format	
Network	Physical / Mac Layer	RJ45, Ethernet	
	Protocol / Function	TCP/IP, DHCP, DDNS / Two-way network audio	
	Browser	WEB monitoring, Remote client SW, Remote setup	
Search		Timer, Motion, Sensor	
Other Function		Pre/Post Event Recording, Summer time, Time Synchronization	
Power		DC 12V / 8.33A (100W)	DC 12V / 6A (72W)
Temperature	Operating / Storage	0 ℃ ~ 45 ℃ / -15 ℃ ~ 55 ℃	
Dimension [mm] (WxHxD)		380 X 348 X 60 (Excluded Stand)	
Weight (Approx.) Net / Gross		7.2㎏ (15.9lbs) / 9.5㎏ (20.9lbs)	7.0㎏ (15.4 lbs) / 9.3㎏ (20.5 lbs)

Before operating the DVR

Instructions

Thank you for buying GRM DVR series

This is the user manual for GRM DVR series. Before installing or operating this product, please familiarize yourself with this user manual.

We retain the copyright on this manual. Therefore, with the exception of copying for general use within the copyright law, copying and reprinting the user manual, either partially or in its entirety, or translating it into another language without our prior written approval.

Product warranty and limits of responsibility

Product warranty does not cover cases of accidents, negligence, alteration, misuses or abuse. In addition, no warranty is offered for any attachments or parts not supplied by the manufacturer.

We are not liable for any or all losses to the product incurred by your use of non-standard product or violation of instructions mentioned in this manual.

The following cases are not covered by the warranty and payment is required for repairs.

- Malfunction due to negligence in handling by the user
- Deliberate disassembly and replacement by the user
- Connection of an improper power supply
- Malfunction caused by natural disasters (fire, flood, etc.)

Warranty only refers to the warranty covering products that have been paid for. After expiration of the warranty period, examination and repair will be provided for a fee. Even during the warranty period, repair and examination of items outside the preceding warranty scope will require a payment.

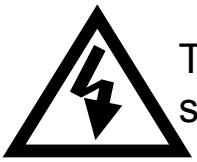
Before Start

This user manual provides Information for using DVR such as brief introduction part names, functions, connection to other equipment, menu setup, and the like. You have to keep in mind the following notices:

If you want to open the case of your system for checking problems,
please consult the expert from the shop where you bought the product.

Before operating the DVR

Safety Precautions - Warnings



The symbol is intended alert to know in order to prevent serious injury or death and Warnings are described below.

※ Before the installation

- Various experience and technical is needed for installation of this product. All installation operations should be performed by the agency you purchased this product from.
- Before connecting the AC power cord to the DC adaptor outlet, make sure the voltage designation of the DC adaptor corresponds to the local electrical supply.
- Do not touch the power cord with wet hands and avoid install under humid conditions or space
- Use only a properly grounded plug and receptacle. An improper ground may cause electric shock or equipment damage.
- Make sure the POWER is OFF before installation
- Do not overload multiple wall outlets, extension cords or adaptors beyond their capacity since this can result in fire or electric shock.
- Do not touch the power plug with wet hand and conductor materials etc. Doing so can cause electrical shock and fire
- Never insert anything metallic or your hand into the open parts of this apparatus Doing so many create a danger of electric shock.
- Make sure to plug the power cord in until it is firmly inserted. When pulling the power cord, do not excessive force. Do not touch the power cord with wet hands.

Before operating the DVR

Safety Precautions - Cautions

The symbol is intended alert to know in order to prevent minor injury or product damages and cautions are described below.

※ During installation

- Keep the required distances between the product and other objects (e.g. walls) to ensure proper ventilation. Failing to do so may result in fire or a problem with the product due to an increase in the internal temperature of the product.
- Do not install or place the product in an unstable location such as a shaky self a slanted floor or a location exposed to vibration.
- Do not place this apparatus near or over a radiator or heat resistor or where it is exposed to direct sunlight.

※ During use

- Do not move the product while it is operating.
- Do not connect the jacks or cables while your product is turned on.
- Do not allow children to hang onto the product.
- If this apparatus does not operate normally - in particular, if there are any unusual sounds or smells coming from it - unplug it immediately and contact an authorized dealer or service center.
- When you install two batteries of remote controller make sure to match the polarity of the batteries.
- Product design and specifications may be changed without notice in order to enhance product performance.
- The slots and openings in the cabinet are provided for necessary ventilation to ensure reliable operation of this apparatus and to protect it from overheating, these slots and openings must never be blocked or covered.
- This apparatus use batteries require you to dispose of batteries properly for disposal or recycling information. Use the same type battery.

Before operating the DVR

FCC Compliance Statement

Caution : Any changes or modifications in construction of this device which
ıre net expressly approved by the party responsible for compliance could
oid the user's authority to operate the equipment.

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) This device must accept any interference received, including interference that may cause undesired operation.

Note : This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

INDEX

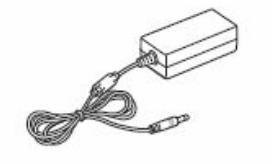
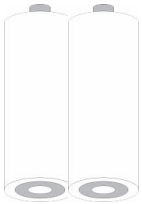
OVERVIEW	1	FEATURES
	2	Specifications
Before Operating the DVR	3	Instructions
	4	Safety Precautions - Warnings
	5	Safety Precautions - Cautions
	6	FCC Compliance Statement
INDEX	7	
Package Contents	9	Package Contents
Optional accessories	10	Optional Cable Adapter
Remote Controller	11	Parts name and Functions
Product exterior	12	8 Channel - Front, Back and Bottom
	13	4 Channel - Front, Back, and Bottom
	14	Exterior Names and Functions
Connecting to other devices	15	Connecting to the 8 channel
	16	Connecting to the 4 channel
	17	Connecting to the RS-485, Sensor
RJ-45 Port Layout	18	Cam Input Pin Assignment
Installation the HDD	19	
Getting Started	20	Starting the System Power off the System Screen ON/OFF
	21	Started Login
Live Mode	22	Icons on the Live Screen
Setting the Menu	23	Main Menu Icons
MAIN MENU	24	Menu Explanation
SYSTEM	25	Setting the System Name
	26	Password

INDEX

SYSTEM	27	Setting System ID
	27	System configuration
	28	Time / Date Change
	29	Firmware Update
	29	Hardware / IP / MAC Address etc
RECORD	30	Setting the Record
	31	Setting the event
	32	Motion Detection
	34	Recording Schedule
CAMERA	36	Camera Setting
	37	PTZ Camera Setting
REPLAY	38	Search
	39	Event Search
	39	Replay
EVENT LOG	40	Event Log
DISPLAY	41	Display
SOUND	42	Sound
BACKUP	43	Backup
NETWORK	44	Network Configuration
	45	DDNS
	46	E-Mail notification
HDD	47	Setting HDD
PTZ CONTROL	48	Controlling a PTZ device
HELP	49	HELP
REMOTE CONTROL	50	Installing the SMART VIEWER
	51	DVR LIST SETUP
	57	What is Web Viewer
	58	Connecting the Smartphone

Package Contents

Please unwrap the product, and place the product on a flat place or in the place to be installed.
Please check the following contents are included in addition to the main unit.

Remote Controller	Mouse (USB)	Power Cord
		
DC Power Adapter	Battery AAA x 2	Users Manual
Remote Client CD		

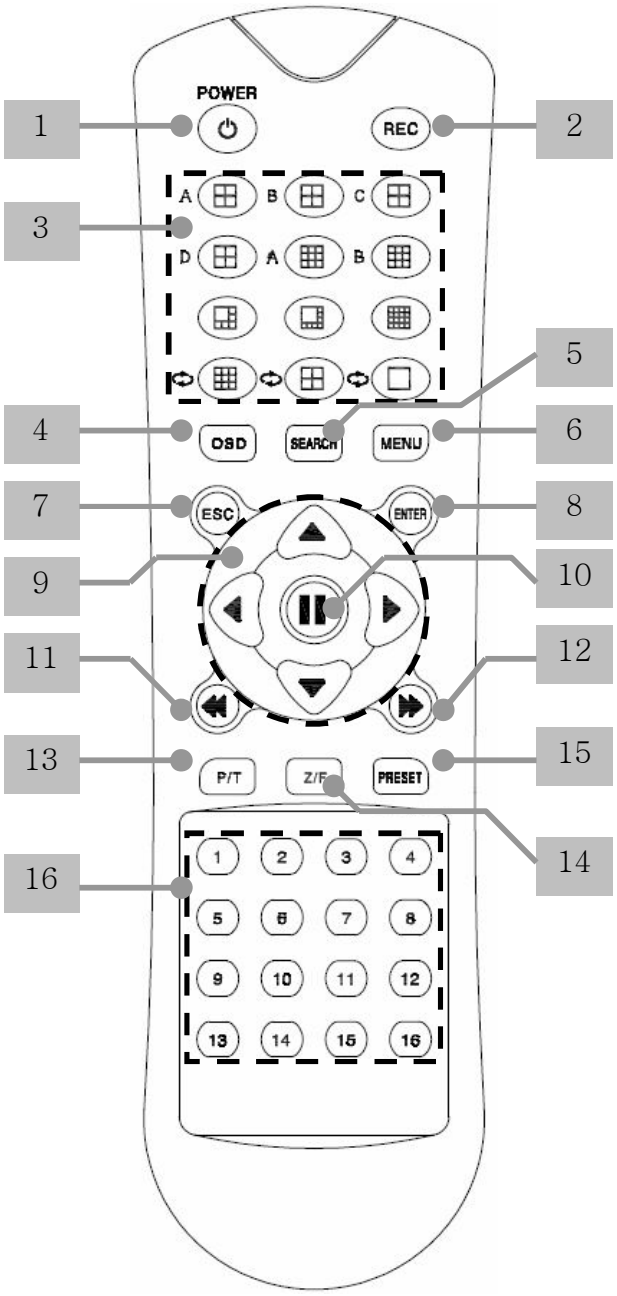
Optional Accessories

Optional Cable Adapter

	GC-C10	RJ45(M) to BNC(F)
	GC-C20	RJ45(M) to BNC(F) / RCA(F)
	GC-C30	RJ45(M) to BNC(F) / PWR(F)
	GC-C40	RJ45(M) to BNC(F) / RCA(F) / PWR(F)
	GC-N40	RJ45(F) to BNC(M) /RCA(M) /PWR(M)
	GC-N50	RJ45(F) to BNC(M) /RCA(M) /RS485

Remote Controller

Parts name and Functions



1. POWER : System power On/Off.
2. REC : Start or Stop emergency recording.
3. Split Screen
4. OSD : On or Off OSD of screen
5. SEARCH : Display search menu.
6. MENU : Display main menu.
7. ESC : Cancel Setting or Moving Menu.
8. ENTER : Select to menu.
9. Direction : Moving cursor up/down, left/right
10. Pause : Used to pause
11. Backward : Backward play
12. Forward : Forward play
13. PAN/TIL T: Sets PTZ Mode ON/OFF.
14. ZOOM/FOCUS : Set zoom and focus of PTZ camera.
15. PRESET : Displays the Preset Setup
16. Numbers : Used as the numeric input keys, or displays a single channel

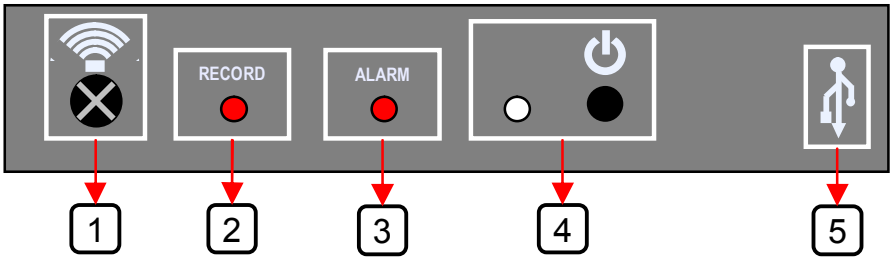
Change ID of Remote control

Select ID numbers and pressing over 3seconds.
The system ID of DVR and ID of the Remote controller should be same to control.

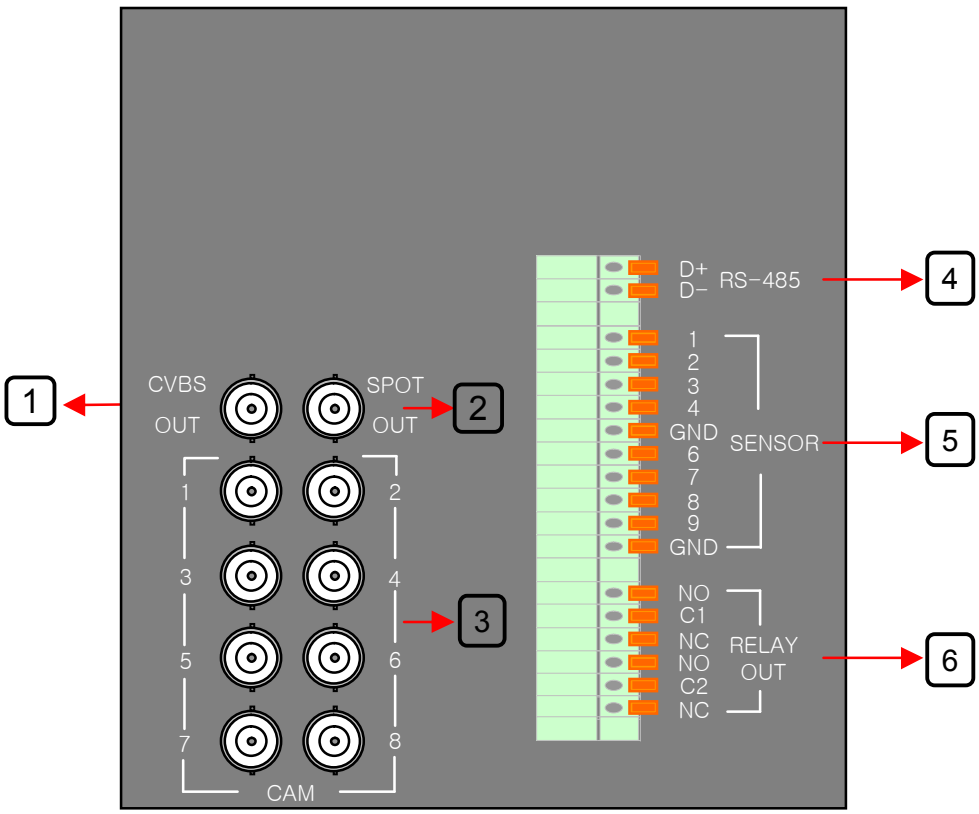
Product exterior

8 Channel – Front, Back and Bottom

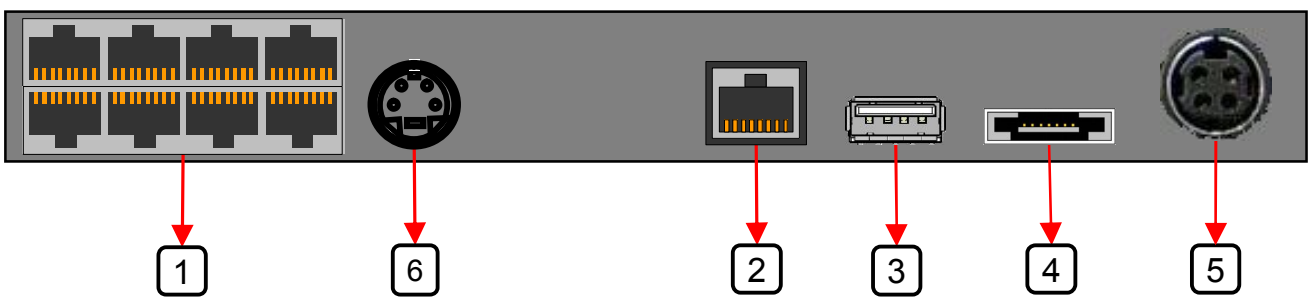
Front



Back



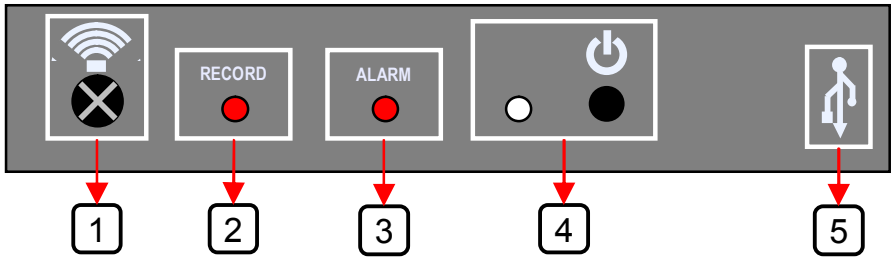
Bottom



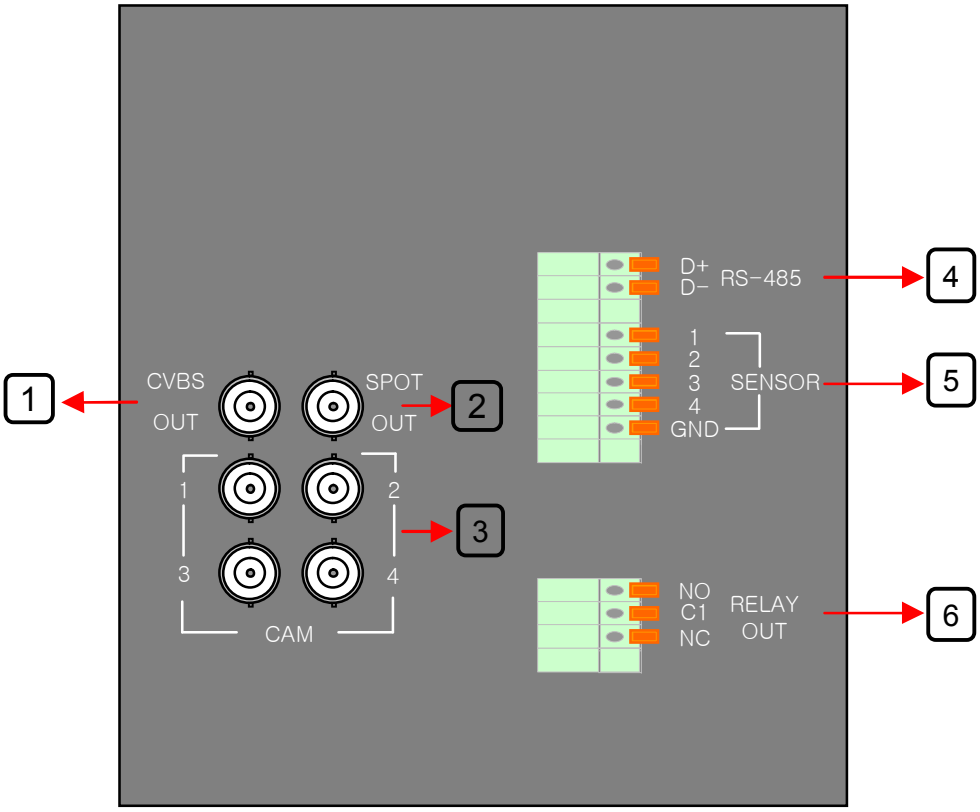
Product exterior

4 Channel – Front, Back and Bottom

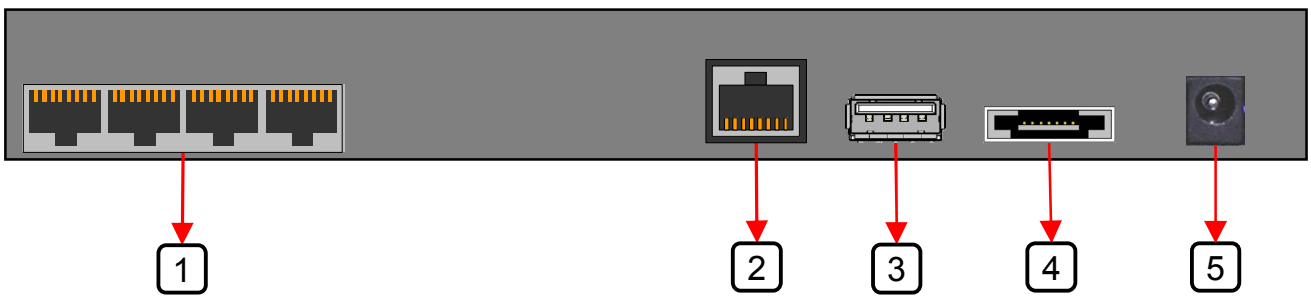
Front



Back



Bottom



Exterior Names and Functions

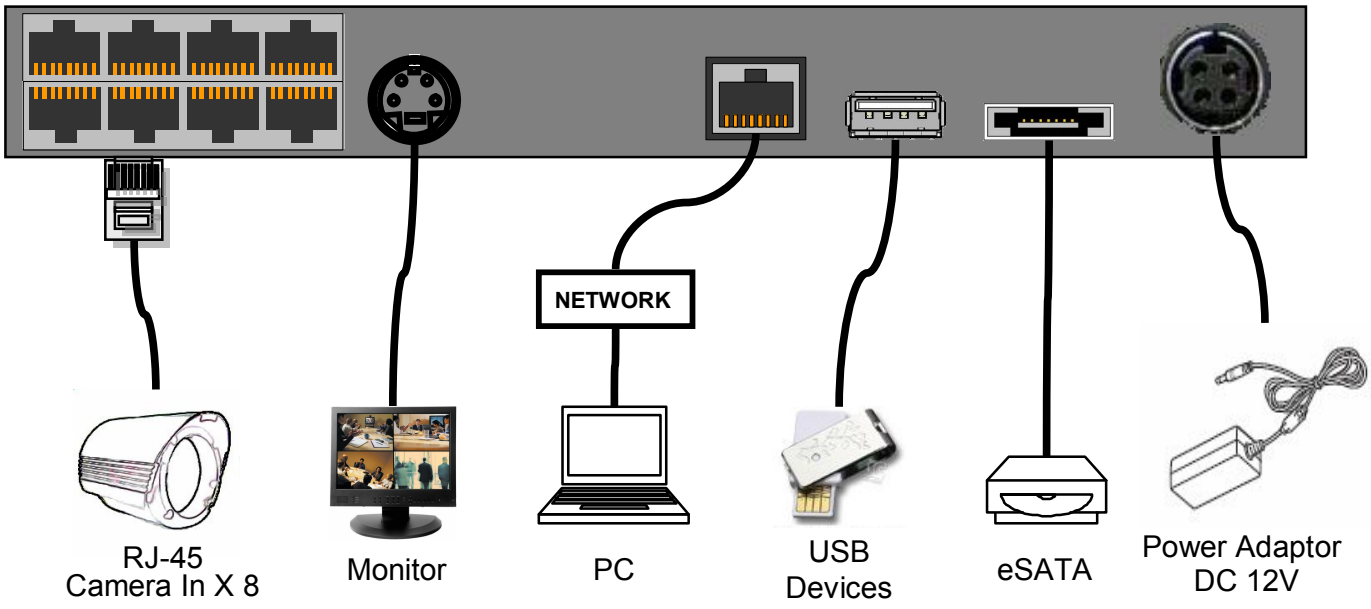
POS	NO	Name	Function
FRONT	1	Receiver	Receive remote control operation
	2	Record	Lighting during recording
	3	Alarm	Lighting occurred event.
	4	Power	Red : Power off Orange: Screen off Green : Operation
	5	USB	USB port (for data backup and FW update)

BACK	1	CVBS out	Out port composite. (BNC)
	2	Spot out	Out port Live image. (BNC)
	3	Video in	Composite Video Signal Input Port (BNC type connector)
	4	RS-485	Used for RS-485 communication (D+, D-)
	5	Sensor In	Alarm Input port
	6	Relay out	Alarm Output port

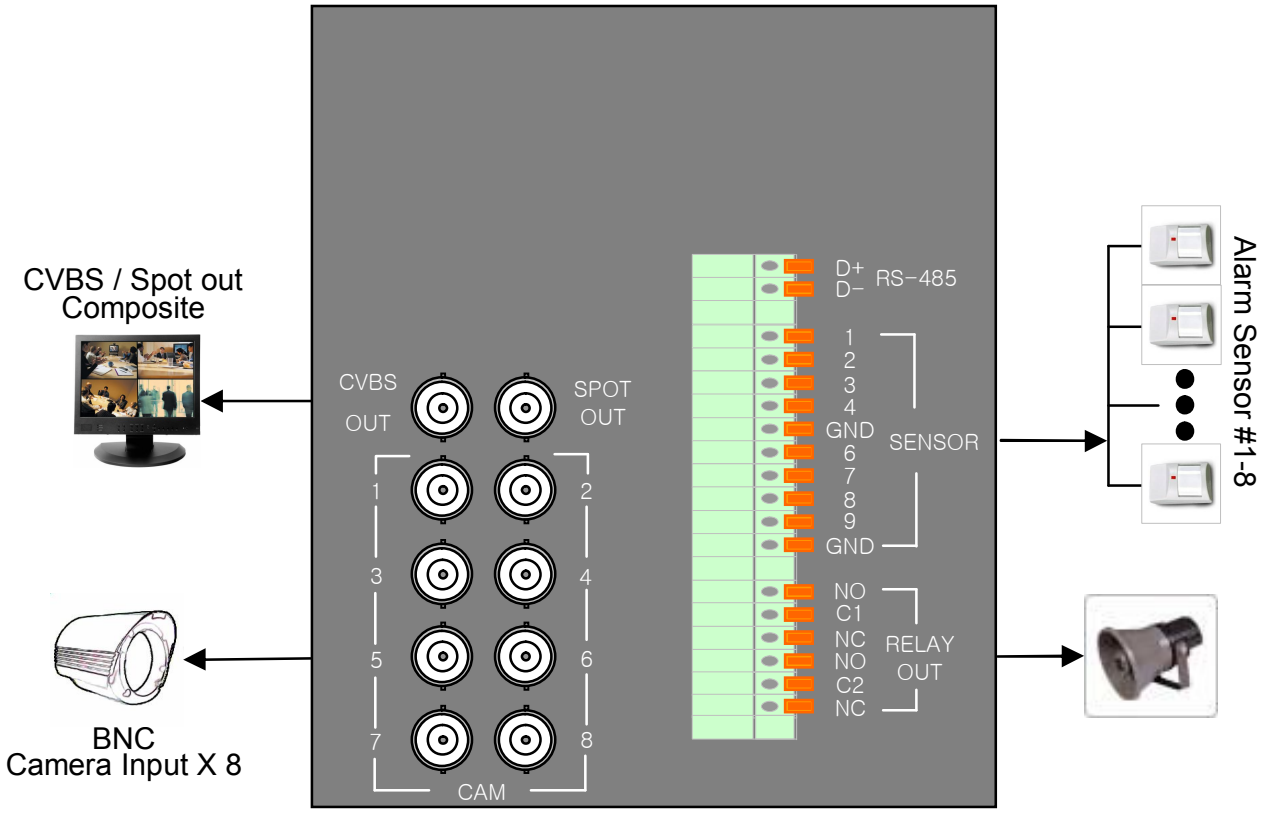
BOTTOM	1	CAM In	Input Video Signal (RJ45 Type)
	2	Ethernet	Used to Network with other devices
	3	USB	USB port (for mouse)
	4	eSATA	Connection terminal for external eSATA HDD or HDD for backup
	5	Power input	DC12V Power input
	6	S-Video	Output Port Separated Video signal

Connecting to other devices

Connecting to the Bottom for 8 channel

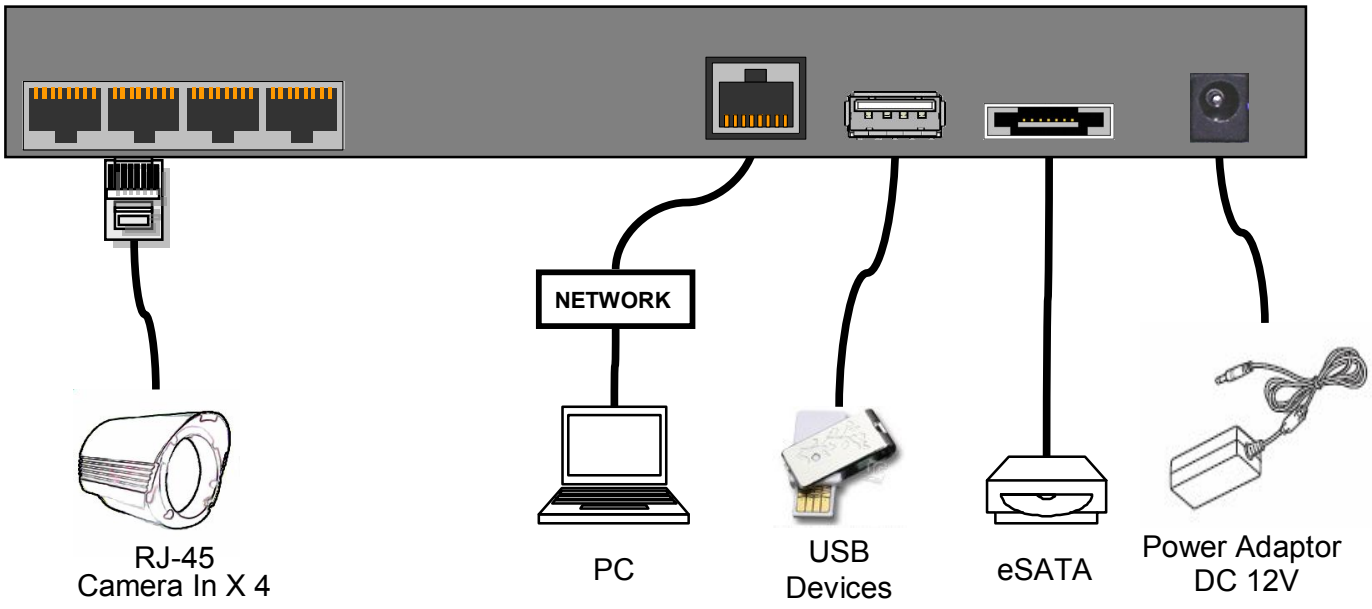


Connecting to the Back

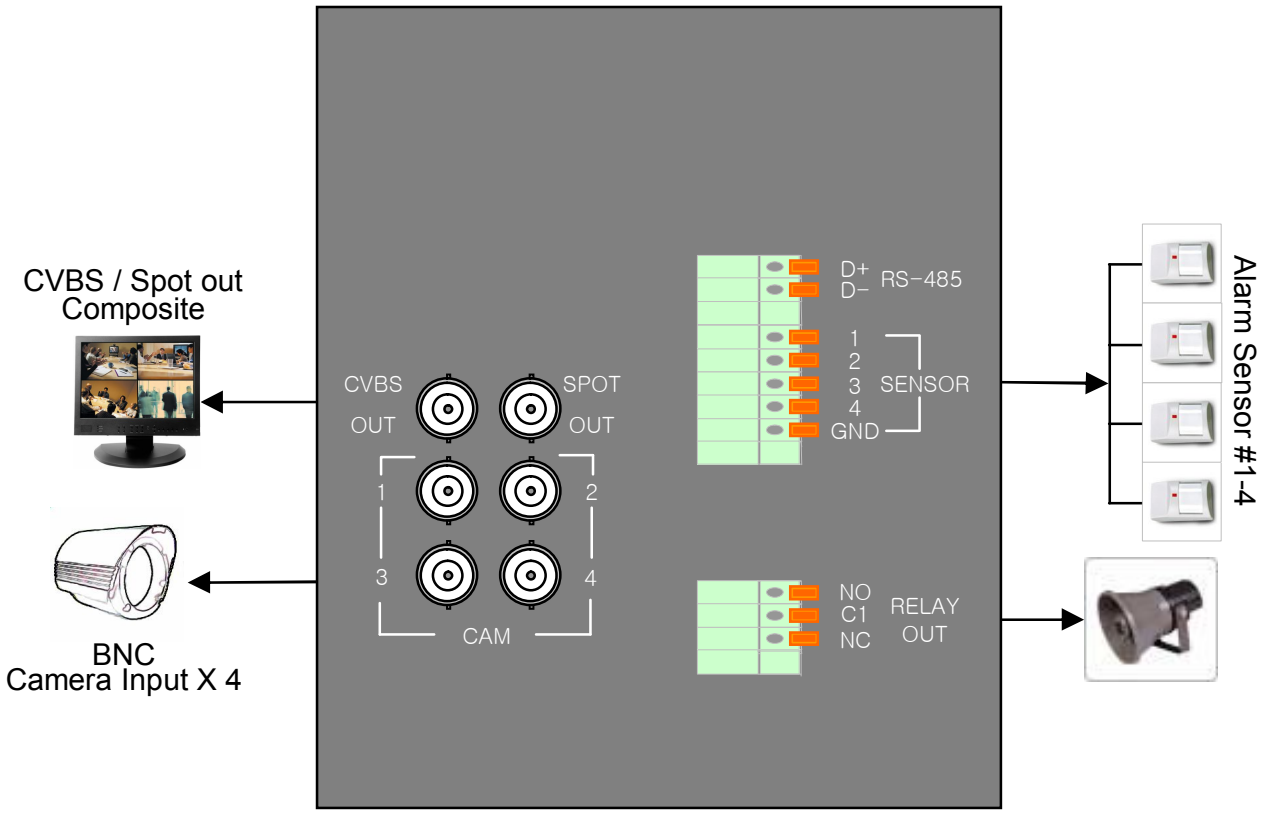


Connecting to other devices

Connecting to the Bottom for 4 channel

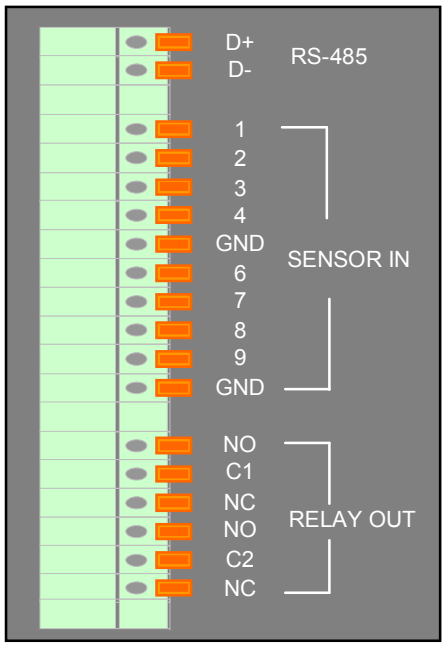


Connecting to the Back

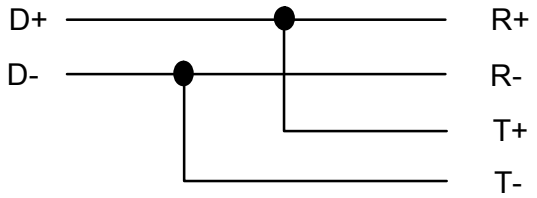


Connecting with the other devices

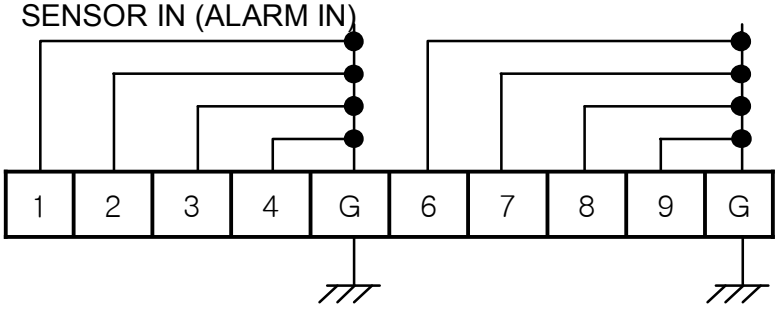
Connecting the 8Channel Sensor in / Relay out / RS-485



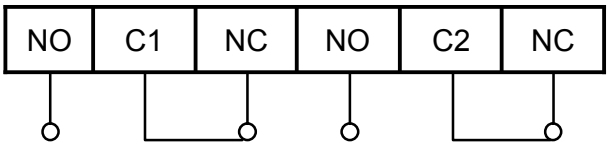
RS-485



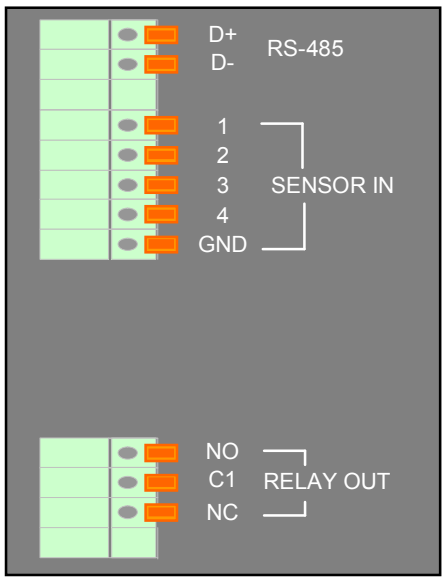
SENSOR IN (ALARM IN)



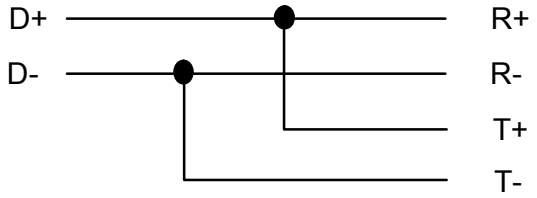
ALARM OUT : 0.5A 125VDC / 1.0A 24VDC



Connecting the 4Channel Sensor in / Relay out / RS-485

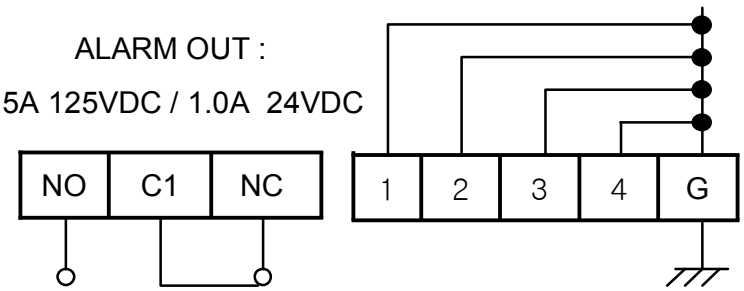


RS-485



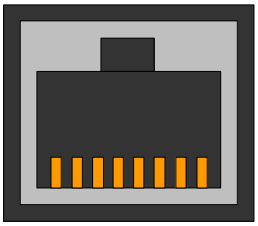
SENSOR IN (ALARM IN)

ALARM OUT :
0.5A 125VDC / 1.0A 24VDC



RJ-45 Port Layout

Cam Input Pin Assignment



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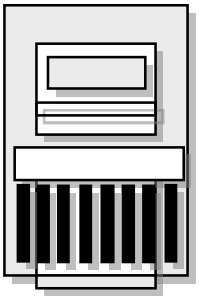
CAM IN
(DVR side)



⑧⑦⑥⑤④③②①

PLUG
(CAM side)

NAME		FUNCTION
①	D+	RS-485 D+
②	D-	RS-485 D-
③	DC 12V	DC 12V OUTPUT (under 300㎃)
④	AUDIO IN	AUDIO INPUT
⑤	GND	GND
⑥	GND	GND
⑦	VIDEO IN	VIDEO INPUT
⑧	TALK	TALK OUTPUT

※ Camera Power limit

The power limit is 300mA per camera from the DVR.
If you want to use over 300mA of camera, you must use separate power sources.

Installation the HDD

Managing the HDD

The HDD is very sensitive device, please ensure that the HDD free from shock.
We are not liable for any damage to the HDD incurred by the user's carelessness and miss use.

The HDD may be damaged if the DVR is moved or impacted during the HDD operation.
Please backup data as often as possible to minimize the risk of data loss from a damaged HDD.
The HDD also may be damaged if the DVR is stopped by a power off during the HDD Operation.

Installation the HDD

There are many factor that cause an electric shock and a fault inside the DVR.
You can contact the retailer to get information including the compatibility list before installation the HDD.
You must check the brand and Model name that is in the compatibility list before Installation.
Please check the number of screws and connection wire after Installation the HDD.
If there are wrong connection or feeling the wire, it causes a fault of the DVR .

Getting Started

Starting the System

1.Connet the power cable of the DVR
to the wall inlet.

2. Press the Power button on the front panel
or remote control.

3. You will see the initialization screen.
The initialization process will last about 3 minutes.

4. The live screen appears with a beep.

<Initial display screen>

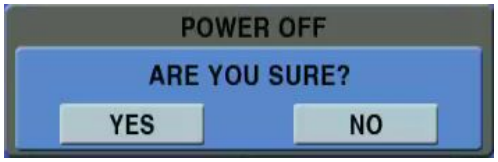
Power off the System

1. You can shut down the system only if you have
logged in to the DVR.
You should have the **POWER OFF** permission
to shut down the system if you are not an admin.

2. Press the **<POWER>** button on the remote control
or the Power button of the front panel more than
2 seconds.

3. The **"POWER OFF"** confirmation window appears.

4. Use Mouse or remote control or the front panel
to move to press and or click **<YES>**.
The system will be Power off.



<Confirmation window>

Screen ON/OFF

Press the Power button of the remote control or the front panel of DVR shortly.
The DVR works normally during screen off.

Started Login

To access a DVR or restricted menu, you should have logged in to the DVR.

1. In live mode, right-click of mouse.
   You will see the context sensitive menu as in the right figure.

2. The login dialog will also appear if you press a menu button on the remote control or mouse when the corresponding menu requires logging in.

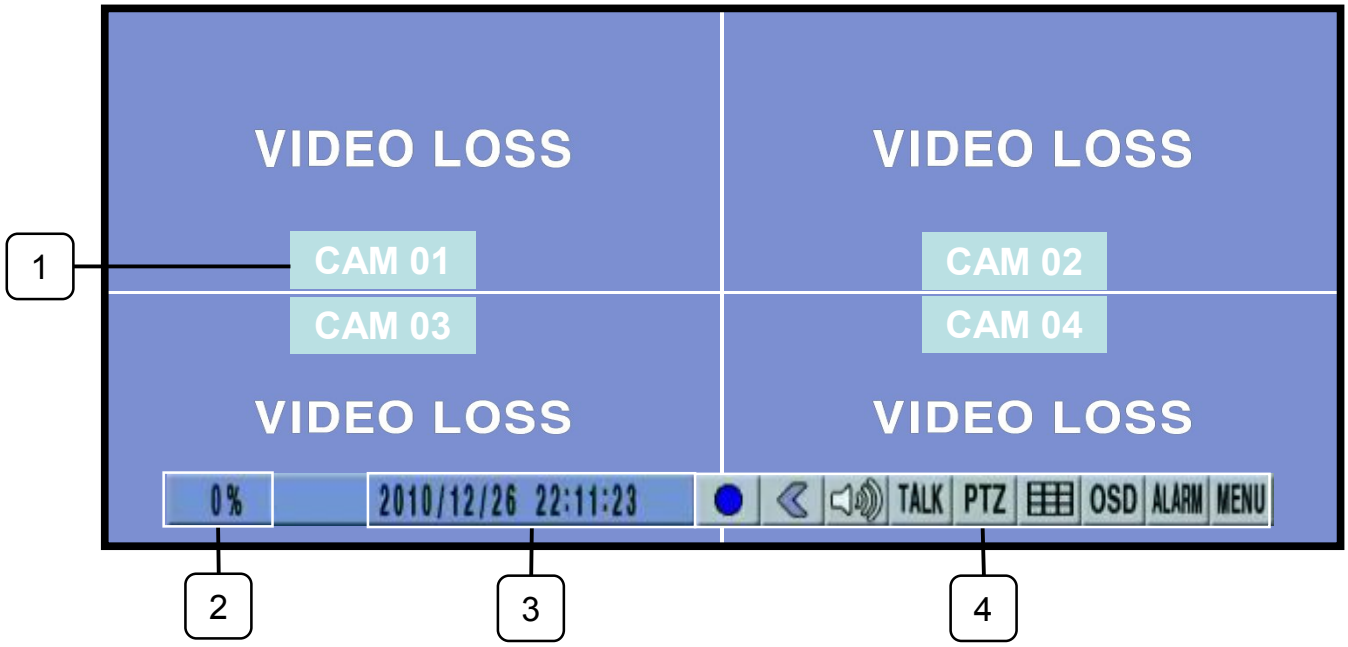
3. Select user, input password and press **<OK>**.
   - **ADMIN** : Permitted all DVR function.
     The default password of **"ADMIN"** is **"1234"**.
   - **USER1** ~ **USER8** : Limited permission by preset of ADMIN.

<Login Window>

Live Mode

Icons on the Live Screen

You can check the status or operation of the DVR with the icons on the live screen.
Press **<CH1>** and **<CH1>**, drag and drop **<CH1>** to **<CH4>** and right click of the mouse.
You can learn the operation of the live screen after pressing the bar of the bottom.



	Name		Description
1	Camera number		Indicates Camera number
2	HDD		Indicates current used capacity HDD
3	Date and time		Indicates current date and time
4	Screen Mode		Recording process and canceled
			Rotate split screen 4, 8 split / or sequence dwell
		OSD	On or off camera number on the live status
	Alarm	ALARM	Stop to alarm if activated
	Main menu	MENU	Go to main menu
	Talk	TALK	Transferred Sound by MIC
	Sound (Option)		Display AUDIO ON / MUTE
	Hide Launcher		Hide live menu bar
	Show Launcher		Show live menu bar

Setting the Menu

Main Menu icons

You can access a desired menu by right clicking or **<MENU>** of the remote control in live screen.
Some menus are protected depending on the user right that assigned by “ADMIN”.
You can return to the live screen by the right clicking quickly.

※ Designated numbers (1 ~ 12) mean sequence of operation manual.

MAIN MENU

Menu Explanation

Back

Power Off

1		See System setting mode <25~29 page>
2		See Record setting mode <30~35 page>
3		See Camera setting mode <36~37 page>
4		See Replay setting mode <38~39 page>
5		See Event setting mode <40 page>
6		See Display setting mode <41 page>
7		See Sound setting mode <42 page>
8		See Backup setting mode <43 page>
9		See Network setting mode <44~46 page>
10		See HDD setting mode <47 page>
11		See PTZ Control setting mode <48 page>
12		See Help mode <49 page>

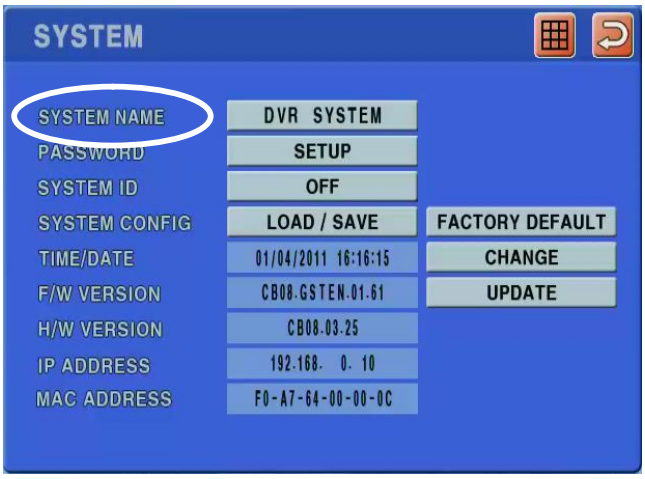
1. SYSTEM

You can setup the system properties, devices, and options for recording, event, backup and network.

1.1 Setting the System Name

You can set and change DVR name and this name is important to access MAC NAME SERVER without entering IP address.

- Click **<SYSTEM NAME>**
  Then appears virtual keyboard.
- You can set and change DVR name.
- You can finish virtual keyboard by clicking the right mouse button or enter key.



<"SYSTEM" menu>

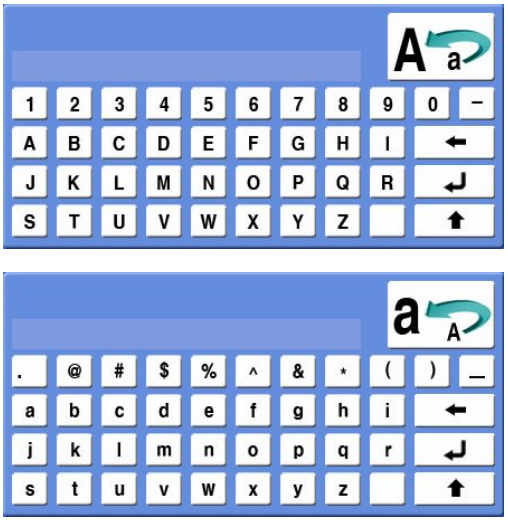
Operation Sequence

MENU ➔ SYSTEM ➔ SYSTEM NAME

※ Using Virtual Keyboard

① For alphanumeric inputs, the virtual keyboard window appears.
② Click the mouse a desired character.
③ You can easily input a small letter, a capital and special characters.

[↵] : close the keyboard
[←] : delete a previous character.
[⬆] : change character set.



1. SYSTEM

1.2 Password

ADMIN can set permissions of each user over the DVR's specific function and settings.

Setting Permission

Manager can set restricted access for all general users.

- Checked (✓) : Accessible
- Not checked : Restricted

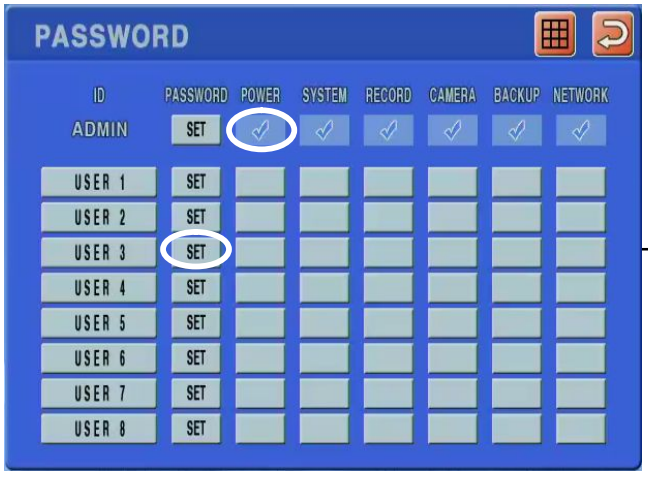
Setting the user's Name and Password

Manager can set or change manager's and user's password including name.

※ By default, the password of "ADMIN" is **"1234"**.

Operation sequence

MENU ➔ SYSTEM ➔ PASSWORD



<"PASSWORD" menu>

<"NEW PASSWORD" menu>

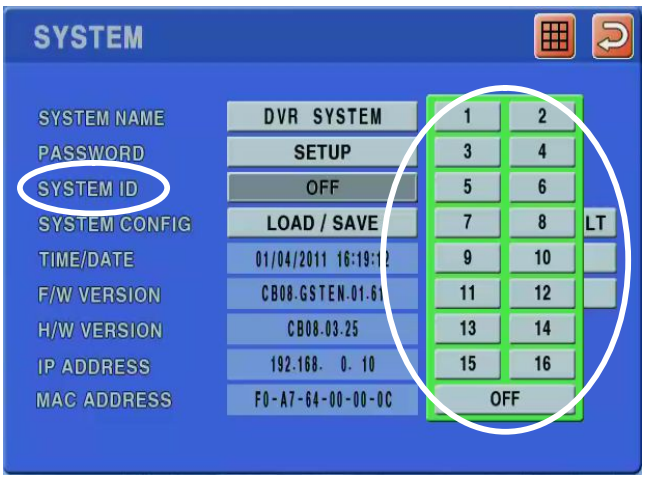
1. SYSTEM

1.3 Setting System ID

If there are many DVRs at near place, they are able to operate simultaneously when press remote controller. But One DVR make controllable by designated ID Number Of System ID number.
Select ID numbers and Pressing over 3 Sec. The system ID of DVR and ID of the Remote Controller should be same to control.

Operation Sequence

MENU ➔ SYSTEM ➔ SYSTEM ID (1~16)



<"SYSTEM" menu>

1.4 System Configuration

You can Load, Save, Delete the DVR settings by using a storage media **[SYSTEM]**, **[USB]**.

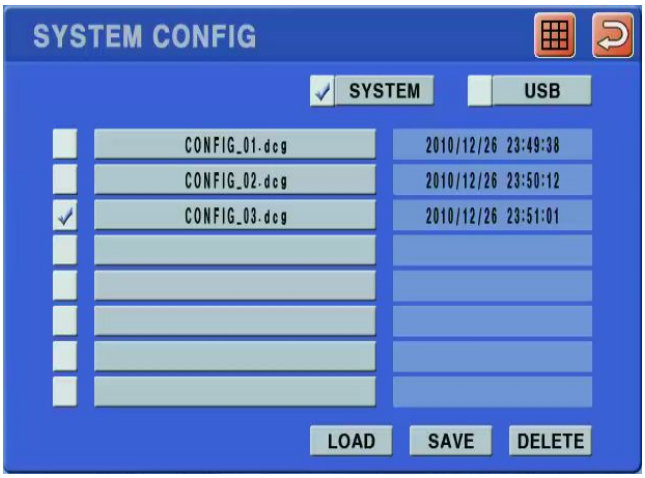
[SYSTEM CONFIG]
Load or Save settings data to a storage device.

- **Storage** : Display Storage media there are USB and SYSTEM.
- **Save** : Save configuration to storage media.
- **Load** : Fetch configuration from storage media.
- **Delete** : Delete the configuration.

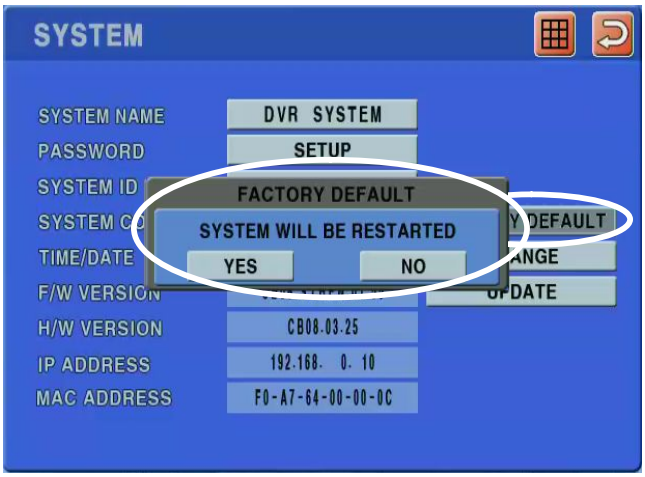
[FACTORY DEFAULT]
If Factory Default is pressed, a confirmation dialog for "**System will be restarted**" window. Click **<YES>** to initialize the system to the factory default and system rebooting.

Operation Sequence

MENU ➔ SYSTEM ➔ SYSTEM CONFIG ➔ LOAD / SAVE or FACTORY DEFAULT



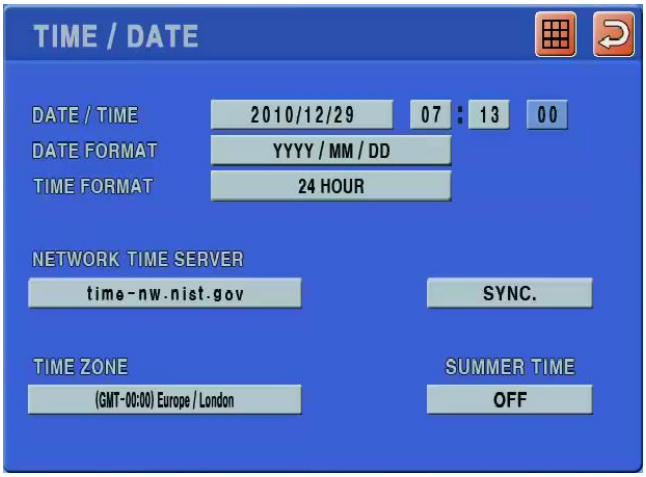
<"SYSTEM CONFIG" menu>



<"FACTORY DEFAULT" menu>

1. SYSTEM

1.5 Time / Date Change



<"TIME/DATE" menu>

You can setup the current Date / Time.

- **DATE/TIME** : Sets the date and the time
- **DATE FORMAT** : Select the date format
- **TIME FORMAT** : Select the time format
- **NETWORK TIME SERVER** : Enter an IP or URL address of the time server.
- **[SYNC.]** : You can set the DVR's current time from selected Time Server.
- **TIME ZONE** : Sets the time zone of your area based on the Greenwich Mean Time (GMT).
- **SUMMER TIME** : Set up Daylight Saving Time.

Operation Sequence

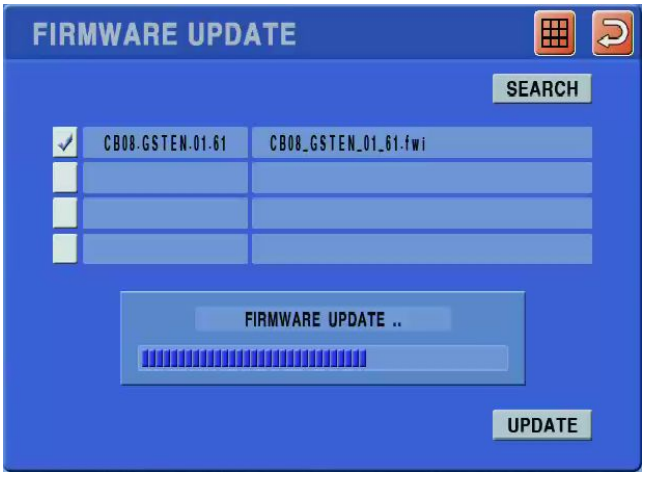
MENU ➔ SYSTEM ➔ TIME/DATE ➔ CHANGE

1. SYSTEM

1.6 Firmware Update

- Connect a device storing the software to be updated. Upgradeable device is USB memory. (It may take several seconds to recognize the device.)
- Select **<UPDATE>** from **[SYSTEM]** menu.
- Choice F/W version and click **<UPDATE>**. While updating, it shows the progress bar.
- Click **<SEARCH>**, if the firmware does not recognize.
- When the updating is done, it automatically restarts.

  Do not turn the power off until it finishes restarting.



<"F/W UPDATE" menu>

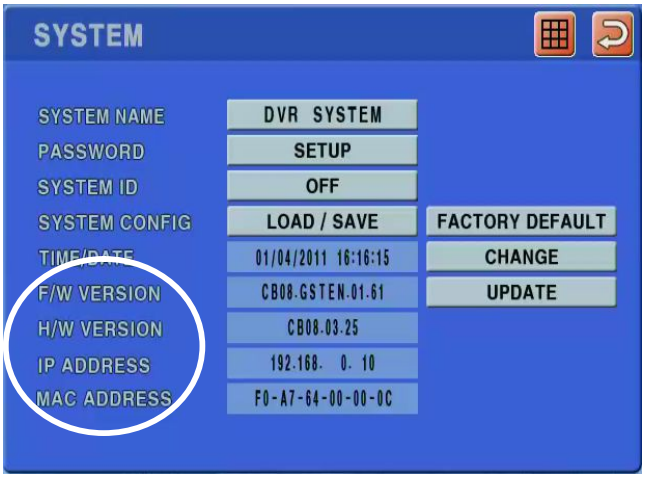
If **"UPDATE FAIL"** appears, retry but continued failure, consult the service center for assistance.

Operation Sequence

MENU ➔ SYSTEM ➔ F/W UPDATE ➔ SEARCH ➔ UPDATE

1.7 Hardware / IP / MAC Address etc

- You can check some information about **Firmware**, **Hardware version**, **IP Address** and **MAC address**.



2. RECORD

2.1 Setting the Record

You can setup scheduled recording, event recording and other recording related settings. You can set each channel's resolution, quality and frame for event recordings.

Using the mouse in **[RECORD]** window to move to **[SIZE]**, **[F/S]**, **[QUALITY]** and Choice conditions you want size, F/S and quality.

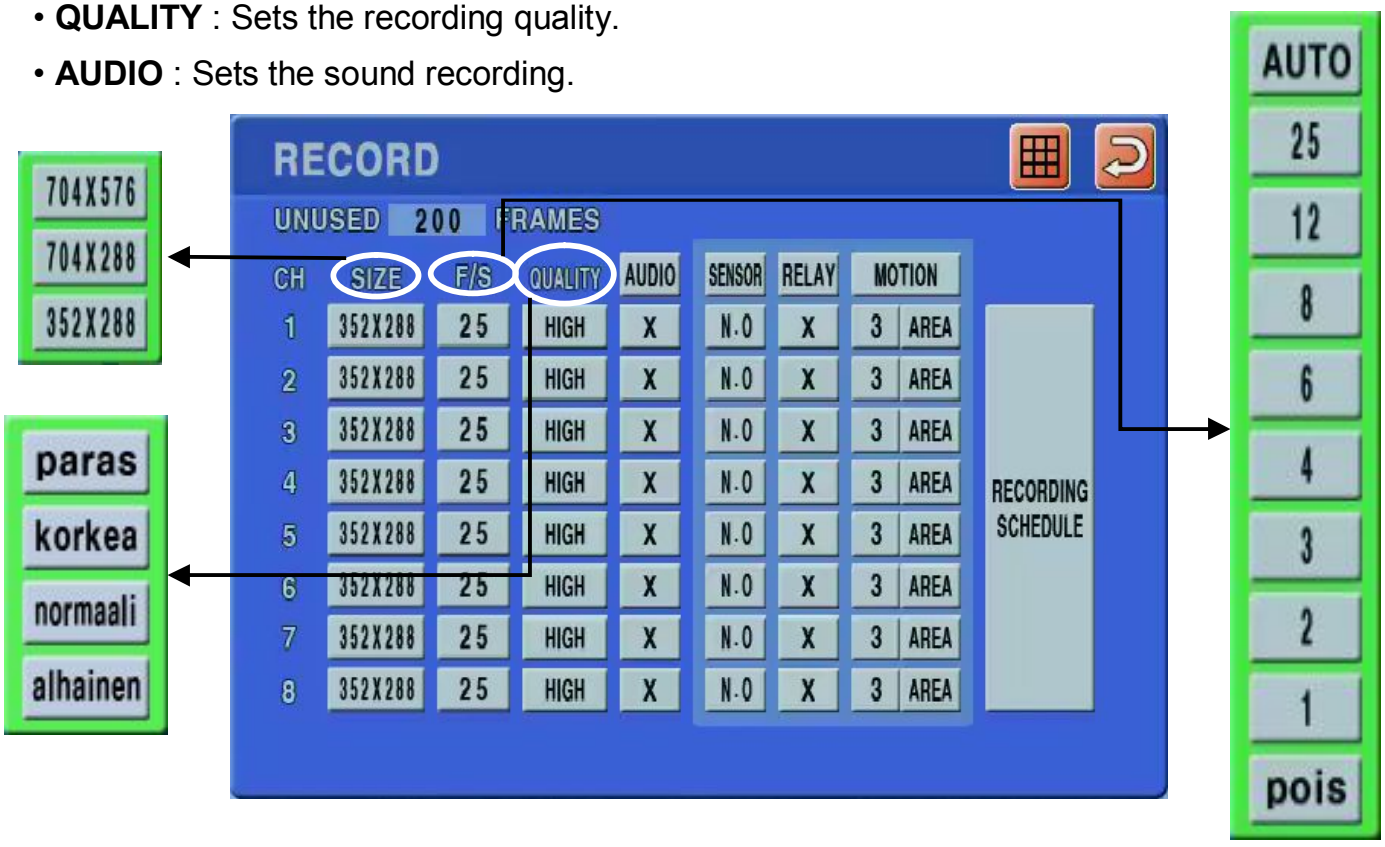
• **SIZE** : Sets the resolution of the recorded screen.

Name	Size	Description
CIF(S)	352 X 240 (NTSC) 352 X 288 (PAL)	Samples each half of horizontal and vertical screen.
Half D1(M)	704 X 240 (NTSC) 704 X 288 (PAL)	Samples half of the horizontal screen.
Full D1(L)	704 X 480 (NTSC) 704 X 576 (PAL)	Samples original screen size.

• **F/S** : It means the frames recorded per a second that is record rate

• **QUALITY** : Sets the recording quality.

• **AUDIO** : Sets the sound recording.



2. RECORD

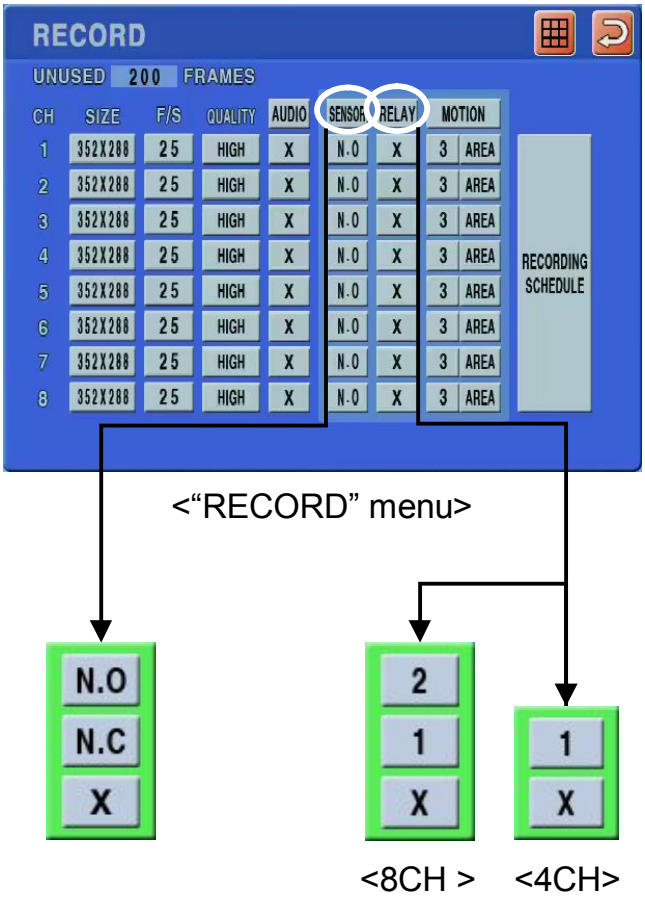
2.2 Setting the event

You can set recording options for sensor, Relay and Motion.

Sensor Detection

You can set the sensor's operating condition. Using the mouse may help easy setup.

• **SENSOR** : Sets the operation mode of sensors. There are modes **[NO], [NC], [X]**
- **N.O** (Normal Open) : Sensor is opened. If the sensor is closed, it generates alarm.
- **N.C** (Normal Close) : Sensor is closed. If the sensor is open by interruption, it generates alarm.
- **X** : Sensor does not operate.


RECORD
UNUSED 200 FRAMES
CH SIZE F/S QUALITY AUDIO SENSOR RELAY MOTION
1 352X288 25 HIGH X N.O X 3 AREA
2 352X288 25 HIGH X N.O X 3 AREA
3 352X288 25 HIGH X N.O X 3 AREA
4 352X288 25 HIGH X N.O X 3 AREA
5 352X288 25 HIGH X N.O X 3 AREA
6 352X288 25 HIGH X N.O X 3 AREA
7 352X288 25 HIGH X N.O X 3 AREA
8 352X288 25 HIGH X N.O X 3 AREA
RECORDING SCHEDULE
N.O
N.C
X
2
1
X
1
X
<8CH >

<"RECORD" menu>

<4CH>

Operation Sequence

MENU ➔ RECORD ➔ SENSOR

Relay Detection

You can set the relay operating condition.

Operation Sequence

MENU ➔ RECORD ➔ RELAY

• The settings of all channels are changed when pressing the bars for **<AUDIO>**, **<SENSOR>** and **<RELAY>**.

2. RECORD

2.3 Motion Detection

You can set detection region and motion sensitivity as well as the alarm signal output. When the motion detection region is set, it detects motion within the area.

• **Sensitivity**
setting the sensitivity and high is more sensitive.

Setting the Motion Area

① Select **<MOTION>**.
At first sets the sensitivity level.
② Select **<AREA>**.
③ When **"AREA"** window appears, select the area of motion detection.

• **ALL SET** : All cells are set to be motion detection area.

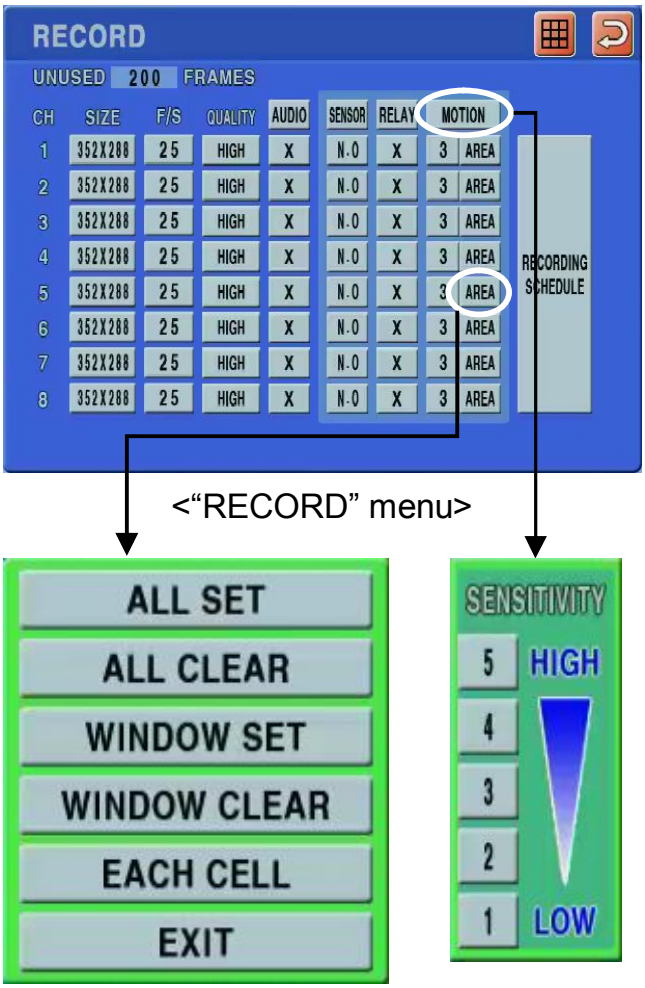
• **ALL CLEAR** : All cells are removed from the motion detection area.

• **WINDOW SET** : Using the mouse drag selected cells are set to be the motion detection area.

• **WINDOW CLEAR** : Using the mouse drag selected cells are removed from the motion detection area.

• **EACH CELL** : You can set or clear the cell for each cell.

• **EXIT** : save the setting and move to the record menu.

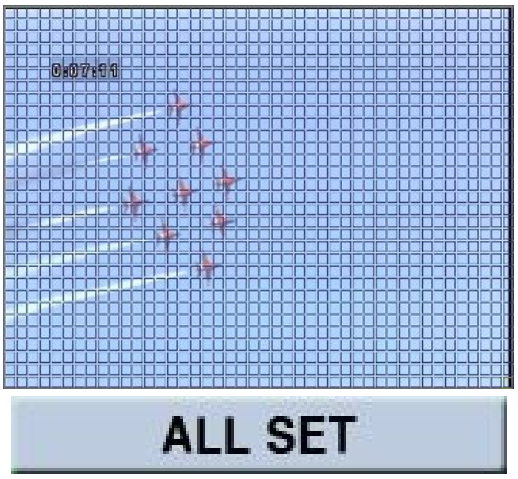

RECORD
UNUSED 200 FRAMES
CH SIZE F/S QUALITY AUDIO SENSOR RELAY MOTION
1 352X288 25 HIGH X N.O X 3 AREA
2 352X288 25 HIGH X N.O X 3 AREA
3 352X288 25 HIGH X N.O X 3 AREA
4 352X288 25 HIGH X N.O X 3 AREA
5 352X288 25 HIGH X N.O X 3 AREA
6 352X288 25 HIGH X N.O X 3 AREA
7 352X288 25 HIGH X N.O X 3 AREA
8 352X288 25 HIGH X N.O X 3 AREA
RECORDING SCHEDULE
<"RECORD" menu>
ALL SET
ALL CLEAR
WINDOW SET
WINDOW CLEAR
EACH CELL
EXIT
SENSITIVITY
5 HIGH
4
3
2
1 LOW

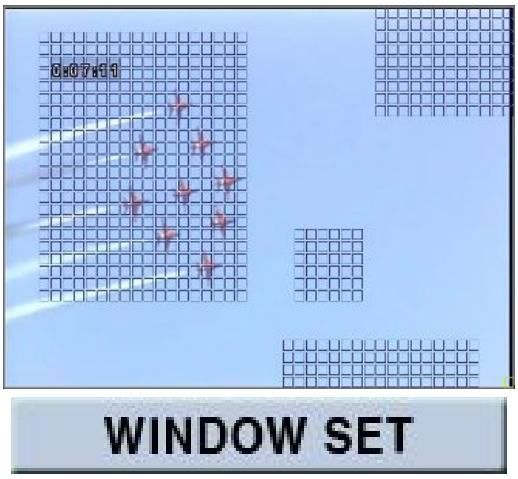
Operation Sequence

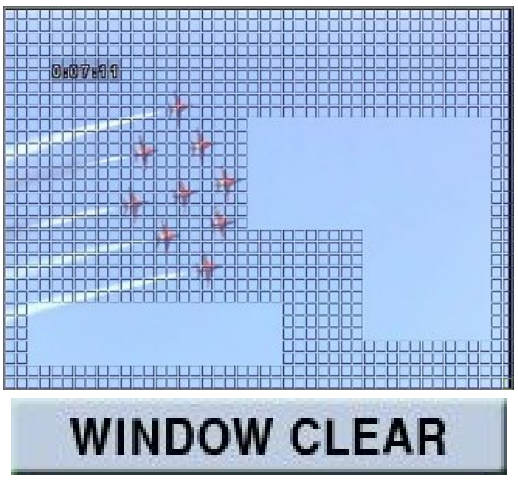
MENU ➔ RECORD ➔ MOTION AREA

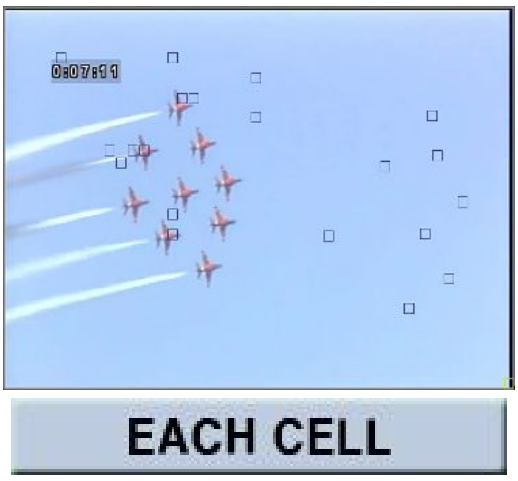
2. RECORD

Setting display of the Motion Area









2. RECORD

2.4 Recording Schedule

You can setup scheduled recording, event recording and other recording related settings.

RECORDING SCHEDULE
Make your reservation on a date and time to schedule the recording on specified time and channel.
If selected **<ALL>**, **"All Channels and time"** are selected.

Event Recording
You can set the beginning and ending point of a recording on an event.
Event recording can be program based on event, time and channel.

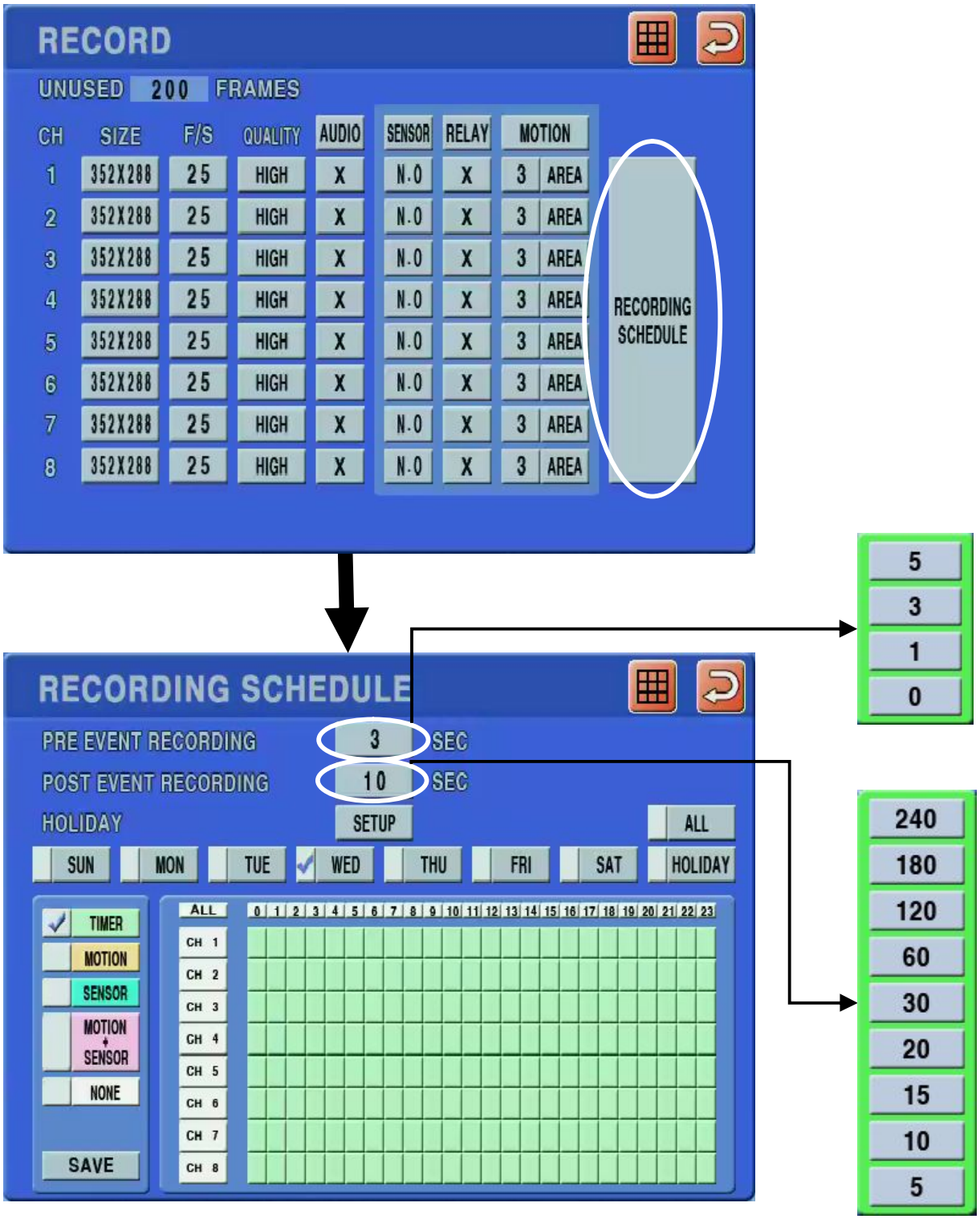
- **PRE EVENT** : The recording will be kept from the point of set pre-event time earlier than the actual occurrence of an event.
  If it is set to 5 seconds, the recording begins from 5seconds before the event.
- **POST EVENT** : The recording will be kept to the point of set post-event time after than the actual end of an event.
  If it is set to 5 seconds, the recording ends in 5seconds after an event.
- **HOLIDAY** :You can set specific dates to Holidays according to your preferences.
  Use to mouse **<SETUP>** move to virtual calendar and click any day.
- **ALL** : If **<ALL>** are selected, you can program the schedule at same time.
- **Event** : Select **<TIMER>**, **<MOTION>**, **<SENSOR>**, **<MOTION + SENSOR>**, **<NONE>** and then select channels and time using the mouse or remote controller.
  Drag function also accept including click action in case of mouse.
- **SAVE** : The settings are saved to memory after pressing the **<SAVE>**.

Operation Sequence

MENU ➔ RECORD ➔ RECORDING SCHEDULE

2. RECORD

Setting the recording



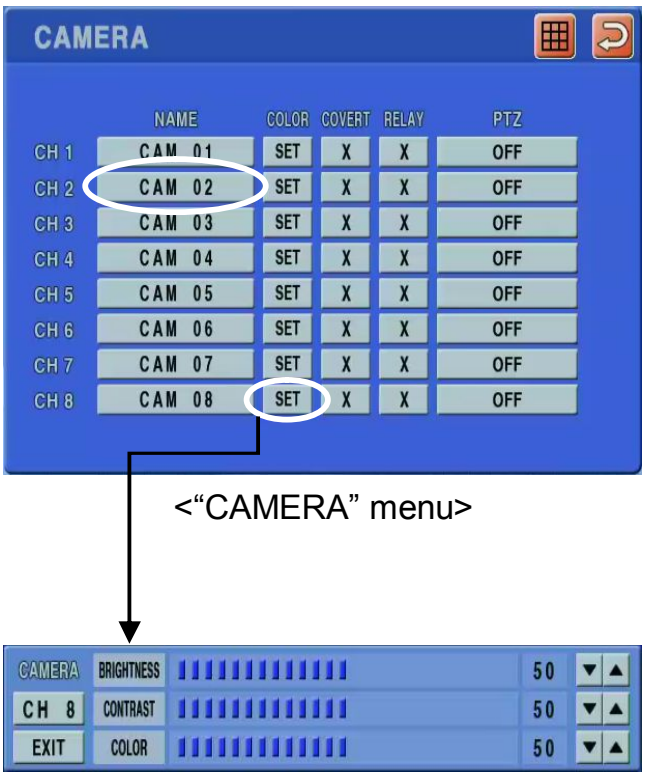
3. CAMERA

3.1 Camera Setting

You can set CHANNEL NAME, COLOR, COVERT, RELAY and PTZ of a camera.

- **CHANNEL NAME** : Using Virtual Keyboard you can input channel name.
- **COLOR** : The video appeared on the screen may vary depending on the channel's camera, configure the DVR display to your preferences.
  - Select a channel and press **<SET>**. You can adjust the **[Brightness]**, **[Contrast]**, and **[Color]** of the selected channel, and **<EXIT>** to return the camera menu.

  In case of the remote controller
  [Brightness] : ▲ , ▼
  [Contrast] : ◀ , ▶
  [Color] : ◀◀ , ▶▶
- **COVERT** : Shows nothing but an empty screen while the recording continues for privacy protection, it does not display the video while the recording continues.
- **RELAY** : You can set relay operation.



<"CAMERA" menu>

Operation Sequence

MENU ➔ CAMERA

3. CAMERA

3.2 PTZ Camera Setting

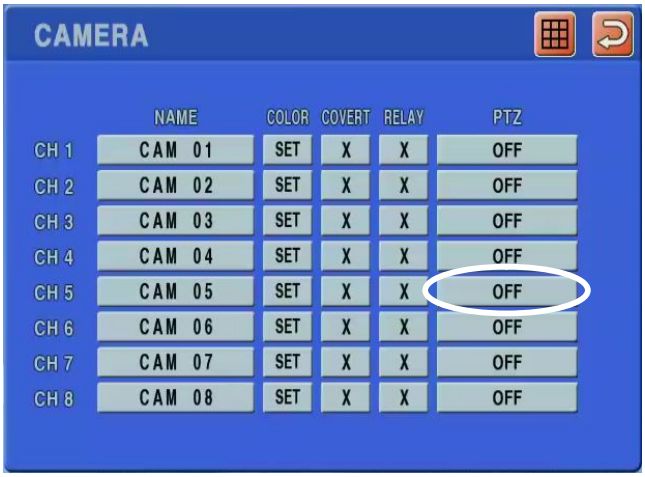
You can set CHANNEL NAME, COLOR, COVERT, RELAY and PTZ of a camera.

Set the values of each communication setup of the remote device.
To use Camera's PTZ functions, ID and protocols of each camera and DVR should be matched.

- **CAMERA CH** : Channel number.
- **CAMERA NAME** : Channel name.
- **PTZ** : PTZ settings ON, OFF.
- **ID** : Set a same ID of the connected camera of each channel.
- **VENDOR** : Select the name of the camera manufacturers.
- **MODEL** : Select the camera model.
- **BAUDRATE** : Baudrate settings of the DVR, PTZ camera and system keyboard should be matched for proper operations.

You can check the camera's ID and protocol if you turn the camera off and on after connecting it to the DVR.

Please check detail information with user manual about PTZ camera.



<"CAMERA" menu>

<"PTZ CAMERA" menu>

Operation Sequence

MENU ➔ CAMERA ➔ PTZ

4. REPLAY

4.1 Search

You can perform the search for recorded data by the time or by the search criteria such as an event.

You can choice one of the storage media **HDD**, **USB** and **eSATA**.

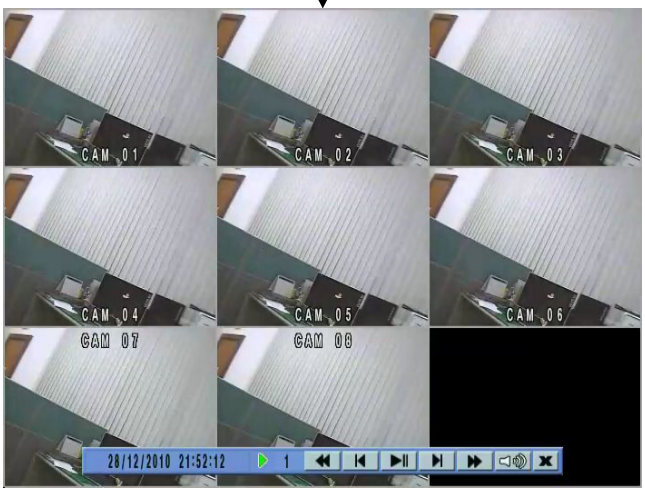
You can search for recorded data of a desired time.

The record data on the specific date will be listed.
The display bar is different color according to the data type.

- **RECORD START** : Start time of the recording.
- **RECORD END** : End time of the recording.
- **REPLAY START** : Enter a time to perform the search or use mouse click.
  Choose a date using the calendar to search, you will see that the date of the recording data
- **START** : Replay will be start from selected time.

  You can search the video data more easily with the calendar.

<"REPLAY" menu>



<"REPLAY" screen>

Operation Sequence

MENU ➔ REPLAY ➔ Select time ➔ START

4. REPLAY

4.2 Event Search

You can specify a time period and search all channels, some channels, all events, motion detection or sensors. There are Timer, Motion, Sensor Event Search.

- **Time Search** : Enter a desired date and time and select search to go to the video at the specified date and time.
- **Motion Search** : If a motion is detected in each channel, you can set a desired area to perform the search. Searches for the motion area for each channel specified in motion area
- **Sensor Search** : You can search for data in the sensor device that is connected to the DVR

Operation Sequence

MENU ➔ REPLAY ➔ Timer or Motion or Sensor ➔ START

4.4 Replay

You can replay the data stored in the **HDD**, **USB** and **eSATA**.
All channel will be displayed at same time.

- **Day / Time** : Displays the time and date of the current video.
- **Speed** : Supports various speed options of x1(-1), x2(-2), x4(-4), x8(-8), x16(-16), x32(-32) and x64(-64), x128(-128), x256(-256), x512(-512)
- **Slow** : Support x1(-1), x1/2(-1/2)
  If you press this key during pause, you can see frame by frame.
- **Sound** : You can control speaker volume.

If you want to return to the Live screen in Play mode, click **<X** : Exit**>** in the menu.

Operation Sequence

MENU ➔ REPLAY ➔ START ➔ Replay controller

Date and Time	Replay Speed	Fast Rewind	Slow Rewind	Play / Pause	Slow Play	Fast Play	Sound	Exit

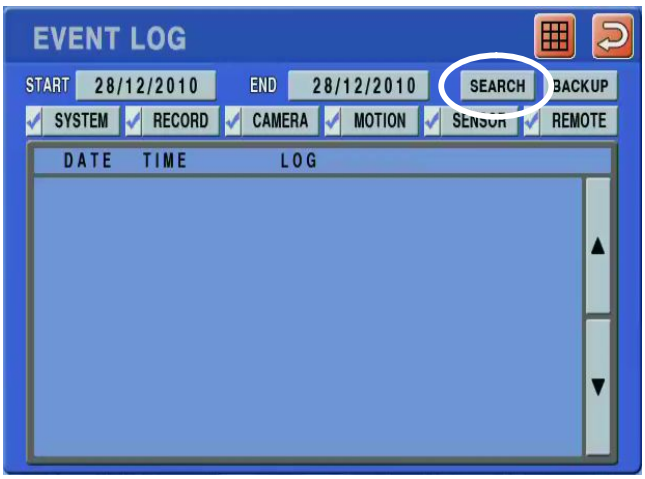
5. EVENT LOG

Event Log

You can browse logs on the system and events.

Event log shows recorded events on system which system log shows log and timestamp on every system startup, system shutdown, and changes on system record, camera, motion, sensor and remote detections.
It also shows the log and its timestamp.

- **START** : Starting search day.
- **END** : Ending search day.
- **SEARCH** : Start search.
- **BACKUP** : Backup to USB the logs.
  The file format of the backup data is **"txt"**



<"EVENT LOG" menu>

Operation Sequence

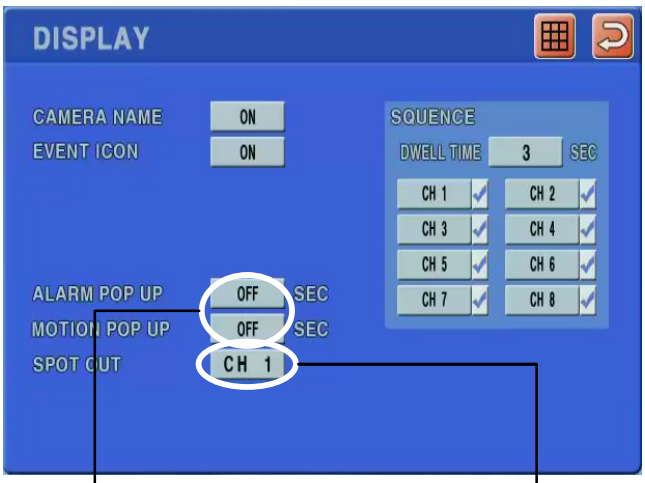
MENU ➔ EVENT LOG

6. DISPLAY

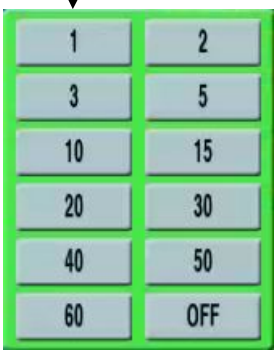
Display

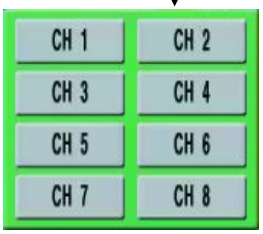
You can configure information to be displayed and its format for spot out monitor.

- **CAMERA NAME** : Display camera name in live screen.
- **EVENT ICON** : Display event icon in live screen.
- **ALARM POP UP** : Pop up display time of the CH after event occurs.
- **MOTION POP UP** : Pop up display time of the CH after a motion event.
- **SPOT OUT** : You can select the channel for the spot monitor.
- **SEQUENCE** : Select channels that will be displayed sequentially.
- **SEQUENCE DWELL** : Sets the dwell time



<"DISPLAY" menu>





<8CH>

<4CH>

Operation Sequence

MENU ➔ DISPLAY

7 SOUND

Sound

Each channel can be set to sound and buzzer can be set related items.

• **AUDIO IN** : You can control the sound corresponding to the channel in Live mode. (Option)

• **BUZZER** : Buzzer can be set followings.

- **REMOTE CONTROL** : Buzzer will beep when pressing Remote control.

- **SENSOR, MOTION, VIDEO LOSS** : Sensor, Motion, Video loss can beep the buzzer.

- **DURATION** : it means beeping time

- **MODE** : beeping mode.

<"SOUND" menu>

※ Latched : beeping is activated based on setup duration.
※ Transparent : beeping is activated during event period.

Operation Sequence

MENU ➔ SOUND

8. BACKUP

You can check the backup device and set the backup schedule by channel and by time.

1. Backup

• **RECORD START** : the start time of the Record.

• **RECORD END** : the end time of the Record

• **BACKUP START** : the start time for the backup

• **BACKUP END** : the end time for the backup

• **CHANNEL** : the channels to be backup. You can select multiple channels.

• **VIDEO** : Video backup

• **AUDIO** : Audio backup

• **AVI / DVR** : Select the backup data format.
- **AVI** : file format that can be played back by using external viewers such as Windows Media Player on a PC
- **DVR** : file format that can be played back by the DVR or the DVR viewer.

• **USB / eSATA** : Select the backup device

• **START** : Backup start.

Operation Sequence

MENU ➔ BACKUP

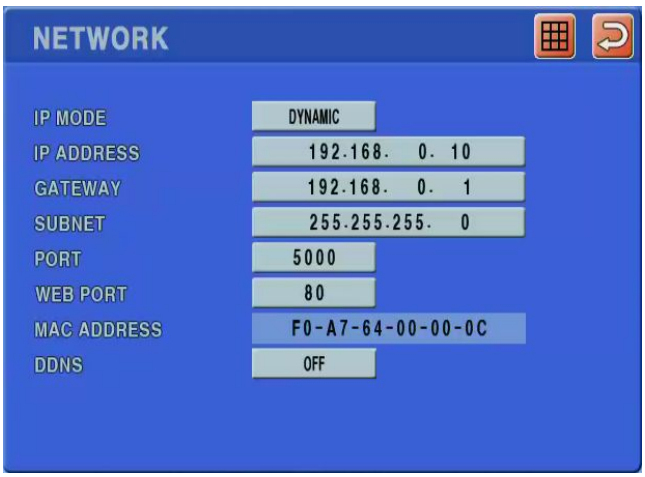
<"BACKUP" menu>

9. NETWORK

9.1 Network Configuration

It provides networked monitoring of Live screen from a remote place, and supports mail forwarding function with events.

You can configure the network environment and method.



<"NETWORK" menu>

• **IP MODE** : You can select Static IP or Dynamic IP

- **STATIC IP** : You can directly input IP address, Gateway, Subnet Mask.
- **DYNAMIC IP** : IP address, Gateway, and Subnet Mask are set automatically.

• **IP ADDRESS, GATEWAY, SUBNET MASK**
When you use the remote controller, use CH11~CH16 keys in order to input "**.**".

• **PORT** : Set the communication port.

• **WEBPORT** : Set the web server port.

• **MAC ADDRESS** : Physical address of the DVR

• **DDNS** : On or Off DDNS

• **E-MAIL NOTIFICATION** : the function that send information to assigned E-mail based on system event.

Operation Sequence

MENU ➔ NETWORK

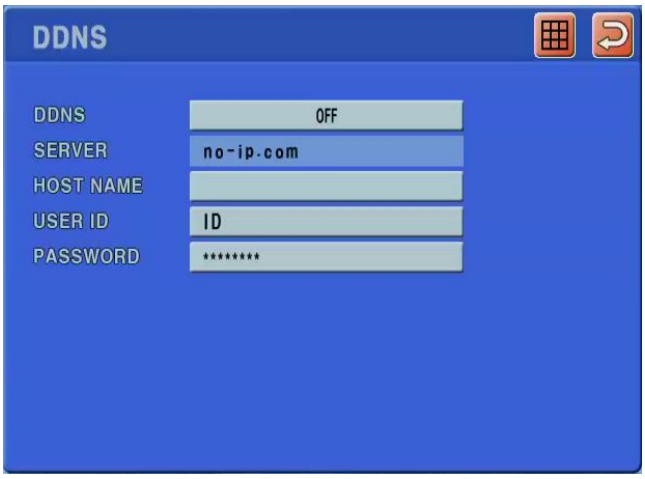
9. NETWORK

9.2 DDNS (Dynamic Domain Name System)

You can set the DDNS site for a remote user's network connection
DDNS is a short form of Dynamic Domain Naming System.

DNS (Domain Name System) is a service that routes a domain name consisting of user friendly characters (ex: www.google.com) to an IP address consisting of numbers (64.233.189.104).

DDNS (Dynamic DNS) is a service that registers a domain name and the floating IP address with the DDNS server so that the domain name can be routed to the IP address even if the IP is changed in a dynamic IP system.



<"DDNS" menu>

• **DDNS** : Select ON or OFF

• **SERVER** : The server name that support DDNS service provider.
(http://www.no-ip.com)
You must register the "USER ID" and the "PASSWORD" before using the DDNS function.

• **HOST NAME** : Enter the HOST NAME that is registered to the DDNS service provider.
(ex. dvr.no-ip.org)

• **USER ID** : Enter the USER ID that is registered to the DDNS service provider.

• **PASSWORD** : Enter the PASSWORD that is registered to the DDNS service provider.

Operation Sequence

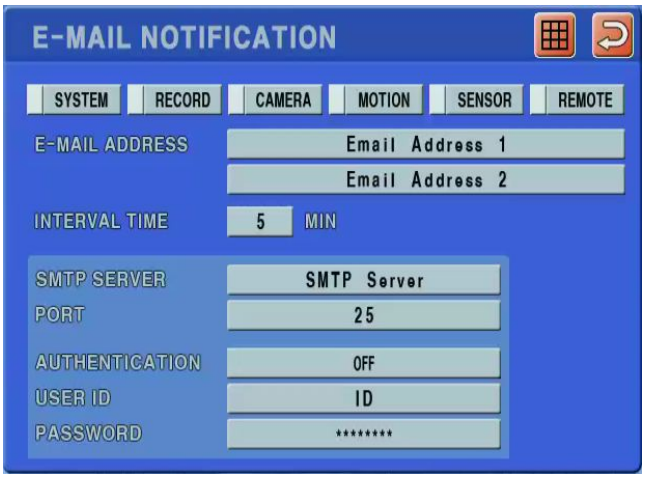
MENU ➔ NETWORK ➔ DDNS

9.NETWORK

9.3 E-Mail Notification

You can send an e-mail to a DVR-registered user at a specific time interval or if an event occurs.

• **EVENT**
You can set the type of the event that will be sent to the user.
Using the mouse may help easy setup.
- SYSTEM
- RECORD
- CAMERA
- MOTION
- SENSOR
- REMOTE



<E-MAIL NOTIFICATION>

• **E-MAIL ADDRESS** :
You can set E-mail address

• **INTERVAL TIME** : Set the event interval.
If a series of events occurs, the e-mail will be sent at the specified interval, not on each event.

• **SMTP SERVER** : Enter a server to connect to.

• **PORT** : Sets the communication port/

• **AUTHENTICATION** : Setup authentication on/off.
If the Mail server users user authentication, setup authentication on.

• **USER ID** : Enter a user to use authentication when connecting to the mail server.

• **PASSWORD** : Enter the password of the mail server.

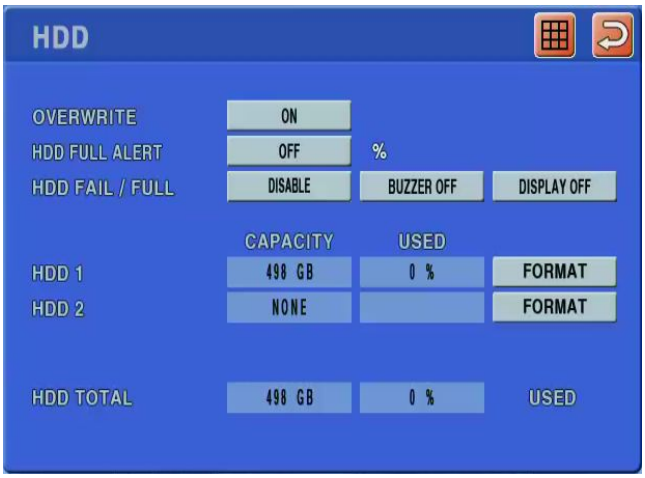
Operation Sequence

MENU ➔ NETWORK ➔ E-MAIL NOTIFICATON

10. HDD

Setting HDD

You can check information for the HDD.



<"HDD" menu>

• **OVERWRITE**
  - **YES** : Overwriting new recoding data from the first area of the HDD after the hard disk was full.
  - **NO** : New recoding will be stop after the hard disk is full.

.

• **HDD FULL ALERT** : **"HDD FULL"** event is activated when the used capacity of the HDD is reached setting value.

• **HDD FAIL / FULL**
  - **RELAY OUT** : Relay out when HDD event occurred.
  - **BUZZER ON / OFF**: Buzzer ON when HDD event occurred.
  - **DISPLAY ON / OFF**: Alert display ON when HDD event occurred.

• **FORMAT** : If press **<YES>** after conformation window, formatting will be start.
"All data will be cleared after formatting", so you must backup the data before format.

• **CAPACITY / USED** : Shows the capacity of the HDD and used status.

Operation Sequence

MENU ➔ HDD

11. PTZ CONTROL

Controlling a PTZ device

The PTZ is activated after setting the camera as PTZ at **"CAMERA"** setting menu.
You can use one camera to perform all functions of PAN, TILT and ZOOM for monitoring multiple places and set the preset to your preference in a desired mode.

• **PAN / TILT :** Control the PAN and TILT of PTZ camera.
Click the PAN/TILT button on the control panel or press the Direction button (U/D/L/R) after pressing P/T(P/T) button on the Remote control.

- PAN : P/T ➔ ◀ ▶ - TILT : P/T ➔ ▼ ▲

• **ZOOM/FOCUS/IRIS** : Control the ZOOM/FOCUS and IRIS of PTZ camera.
Click the ZOOM/FOCUS/IRIS button on the control panel or press the Direction button (U/D/L/R/FF/REW) after pressing Z/F(Z/F) button on the Remote control.

- ZOOM : Z/F ➔ ◀◀ ▶▶ - FOCUS : Z/F ➔ ▼ ▲ - IRIS : Z/F ➔ ◀ ▶

• **PRESET** : A preset is a set of specific target points of a PTZ camera.
The number of preset is depended on maker and model.
- SET : You can save the preset number.
- GO : You can run a number of preset settings .

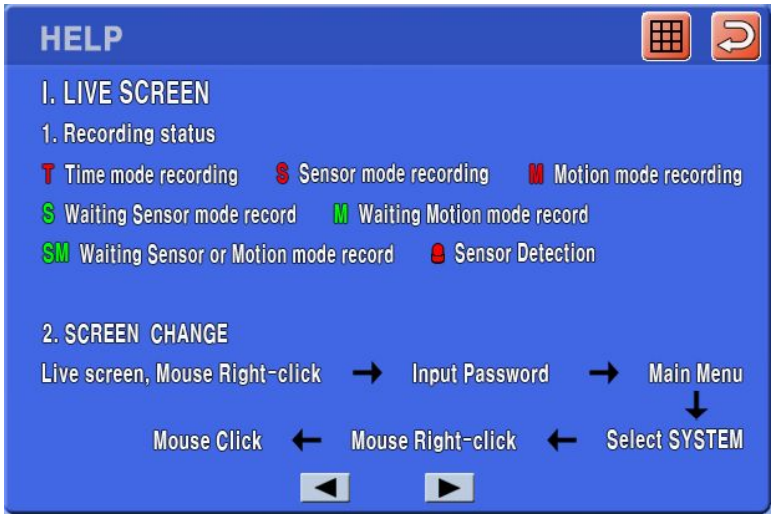
- PRESET setup : PRESET ➔ 1~0(10) ➔ SET (▶▶)
- PRESET run : PRESET ➔ 1~0(10) ➔ GO (ENTER or ❚❚)

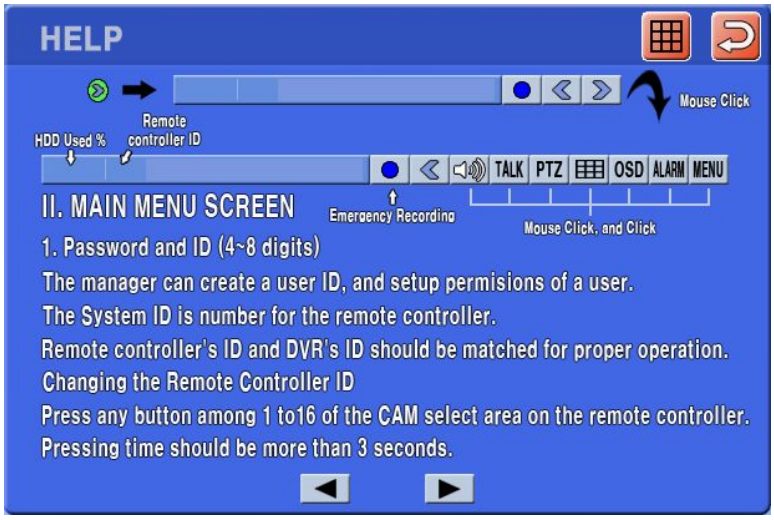
* Please refer to the user manual of PTZ camera about function and setting.

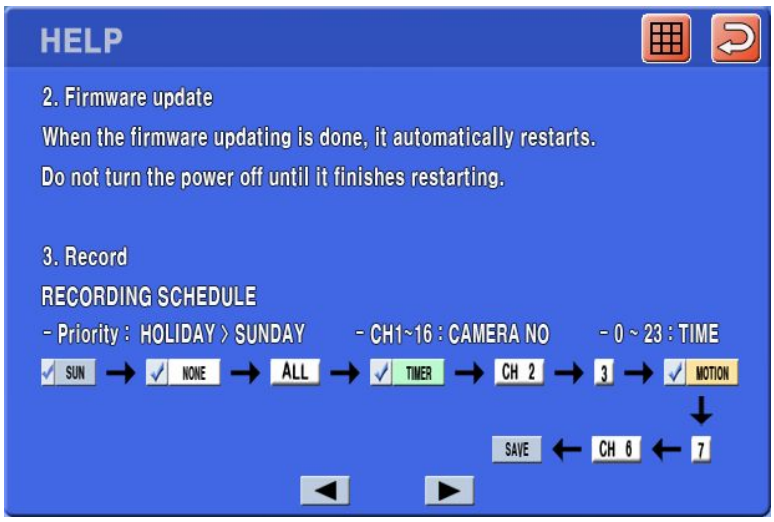
*** You must connect separated DC adaptor because PTZ camera consume a large current. If you connect PTZ camera to DVR directly, it cause out of order**

Operation Sequence
MENU ➔ PTZ CONTROL

12. HELP


HELP
I. LIVE SCREEN
1. Recording status
T Time mode recording
S Sensor mode recording
M Motion mode recording
S Waiting Sensor mode record
M Waiting Motion mode record
SM Waiting Sensor or Motion mode record
Sensor Detection
2. SCREEN CHANGE
Live screen, Mouse Right-click
Input Password
Main Menu
Select SYSTEM
Mouse Right-click
Mouse Click

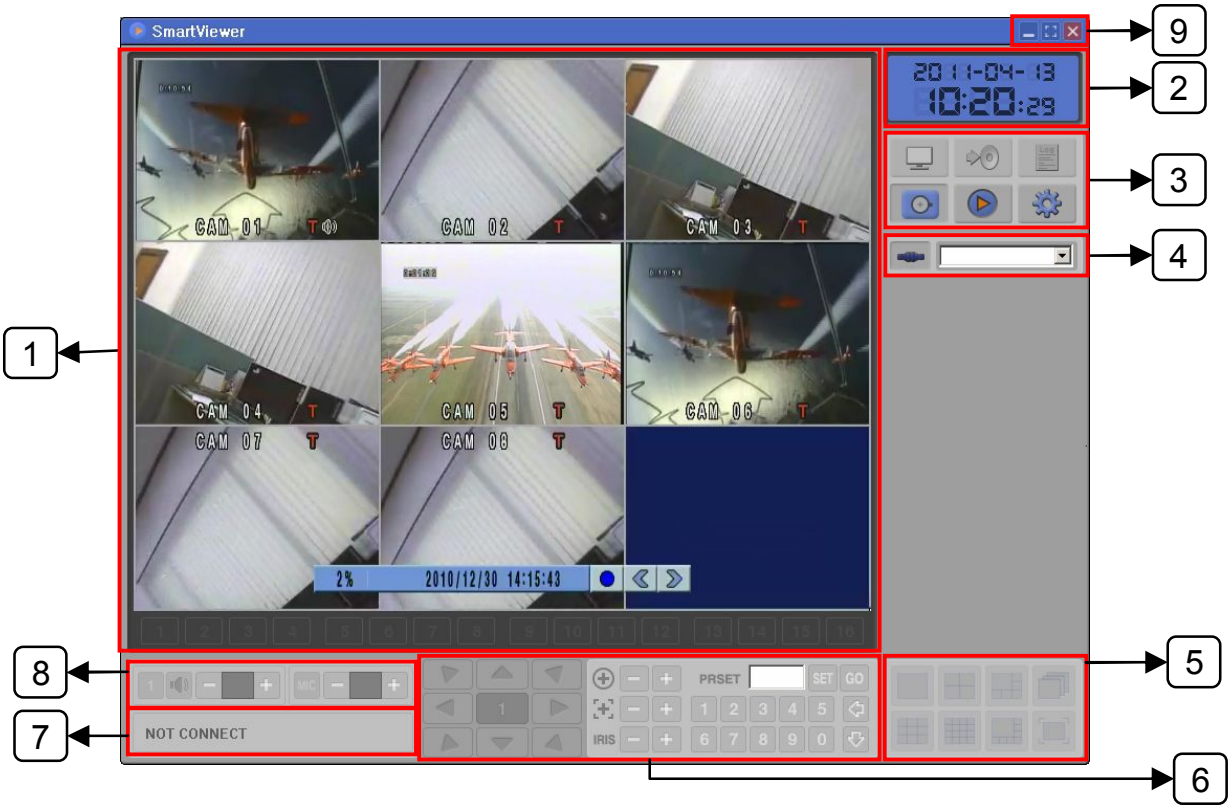

HELP
Mouse Click
Remote controller ID
HDD Used %
TALK
PTZ
OSD
ALARM
MENU
II. MAIN MENU SCREEN
Emergency Recording
Mouse Click, and Click
1. Password and ID (4~8 digits)
The manager can create a user ID, and setup permisions of a user.
The System ID is number for the remote controller.
Remote controller's ID and DVR's ID should be matched for proper operation.
Changing the Remote Controller ID
Press any button among 1 to16 of the CAM select area on the remote controller.
Pressing time should be more than 3 seconds.


HELP
2. Firmware update
When the firmware updating is done, it automatically restarts.
Do not turn the power off until it finishes restarting.
3. Record
RECORDING SCHEDULE
- Priority : HOLIDAY > SUNDAY
- CH1~16 : CAMERA NO
- 0 ~ 23 : TIME
SUN
NONE
ALL
TIMER
CH 2
3
MOTION
SAVE
CH 6
7

13. REMOTE CONTROL

Installing the SMART VIEWER

Execute **"SmartViewer.exe"** of the CD that packed with DVR set, then below screen will be displayed on your monitor of the PC.

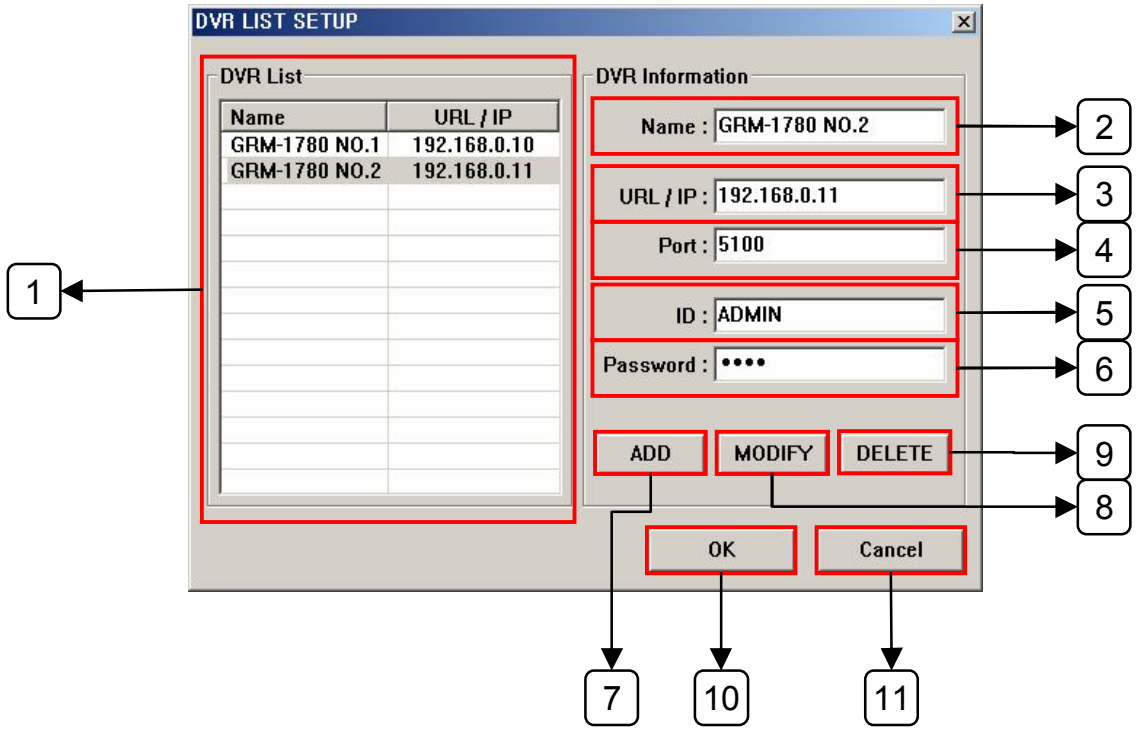


NO	Explanation
1	The screen of connected DVR.
2	Displays current time and date
3	Terminal mode, Live mode, Backup, Replay, Event Log, DVR Setup (Menu)
4	Connect/Disconnect, DVR List
5	Changes full screen or spilt screen
6	Controls PTZ camera
7	Connection Information (System name, IP Address)
8	Controls audio output and microphone input level
9	Controls full screen, small screen and Exit

13. REMOTE CONTROL

DVR LIST SETUP

1. Open your DVR SETUP menu ( ) and input the IP/URL, name of DVR .
2. Set the ADMIN ID and password same to those of the DVR ADMIN.
   For users, enter the DVR user ID and password.



NO	Name	Explanation
1	DVR List	Listed Registered URL/IP
2	Name	Input DVR name
3	URL/IP	Input DVR IP / URL Address
4	Port	Input Port number of DVR
5	ID	Input ID of connecting DVR (ADMIN or User)
6	Password	Input user's password of DVR
7	ADD	Add new DVR List after input new DVR information
8	Modify	Save modified data of the DVR List
9	Delete	Delete DVR List
10	OK	Saved current setting and exit the setup window
11	Cancel	Cancel all changed data and exit

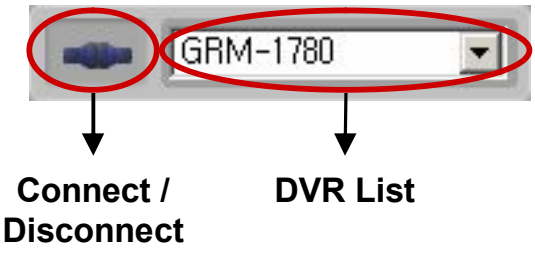
13. REMOTE CONTROL

• Live Screen

This is a live screen that connected a DVR.
If you select one channel, the channel
will be pop up as full screen.

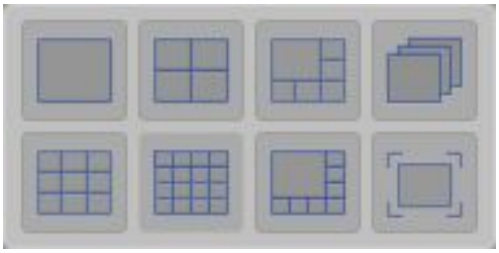
• Connecting the Smart Viewer

1. Click **<DVR Setup>** and make DVR list after input DVR information.
2. Find and click the **<DVR List>** after pressing the DVR list icon.
3. Click **<Connect/Disconnect>** icon to connect.
4. Live screen of the DVR will be display on monitor.
5. You can control the DVR with several function.
6. Click **<Connect/Disconnect>** icon to disconnect



• Changing the live screen

You can select several split mode,
sequence mode and full screen.
Click mouse on the tool bar.



• Audio output and MIC input

Audio output and MIC input are controlled by “-” and ““+”.
Click the number “ 1 ” that means channel,
the channel number will be increased.

13. REMOTE CONTROL

• Controlling PTZ camera

You can control the PTZ camera with the same method as DVR.

- You can zoom in or out the image by using “-” and “+”.
- You can adjust the focus by using “-” and “+”.
-

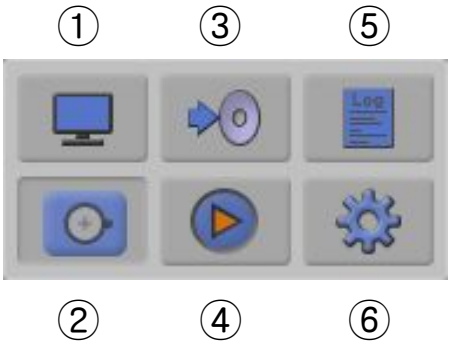
You can adjust the entering light amount by using “-” and “+”.

• Connection Information

When connect DVR,
connection information of DVR appears.

13. REMOTE CONTROL

• Function



① Terminal mode　② Live mode
③ Backup　④ Replay
⑤ Event Log　⑥ Menu

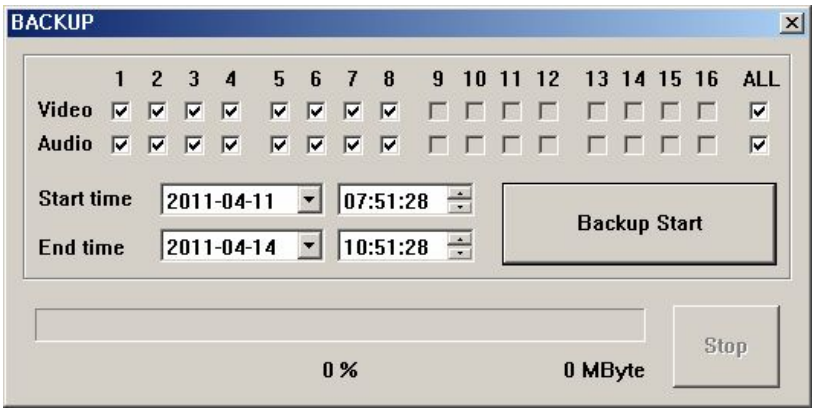
① Terminal mode

You can control all function of the DVR in this mode (Terminal mode) via SmartViewer.

② Live mode

This mode (Live mode) is displayed inputted video only.

③ Backup



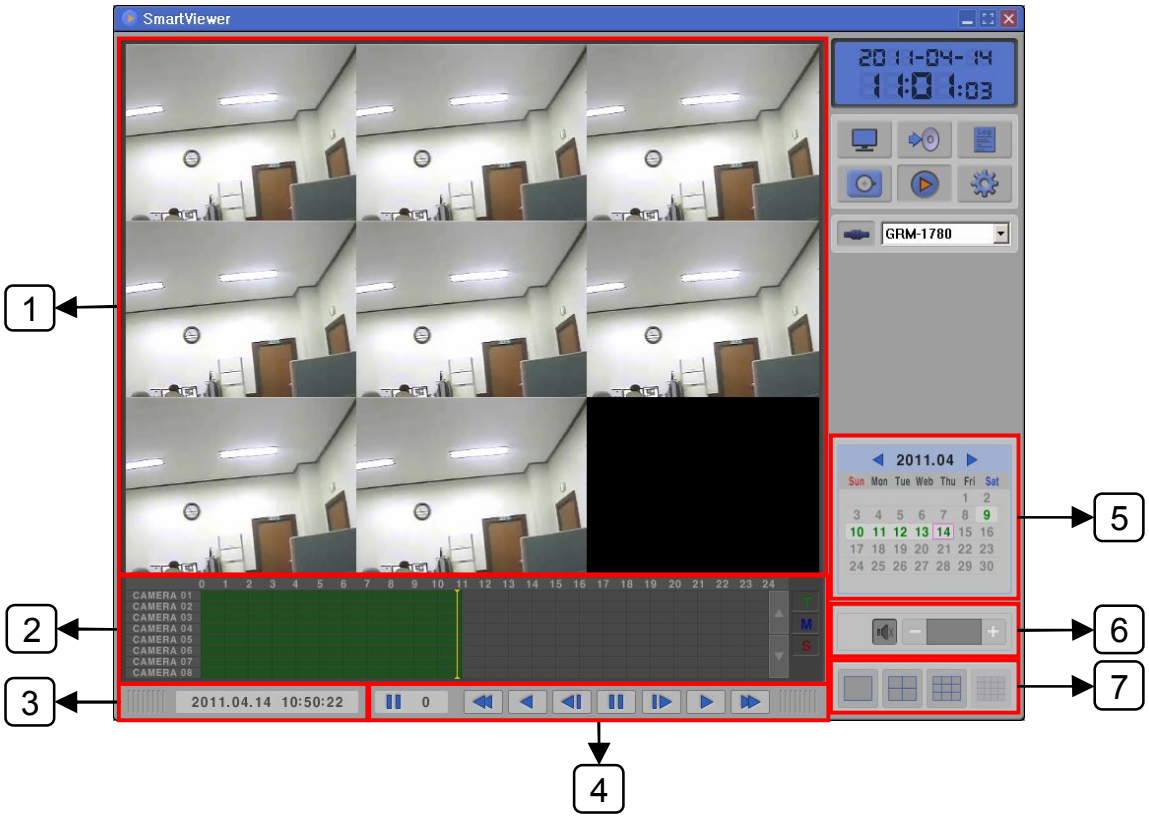
1. Click ‘BAKCUP’( ) button, ‘BAKCUP’ window appears.
2. Select the channel to be backup. You can select multiple channels.
3. Set ‘Start time’ and ‘End time’ for backup.
4. Click ‘Backup Start’ button, to start backup.
   While saving the data, it shows the progress bar.

※ The AVI files will save the AVI files folder.
(.\SmartViewer\bakcup\avi\ )

13. REMOTE CONTROL

• Function

④ Replay



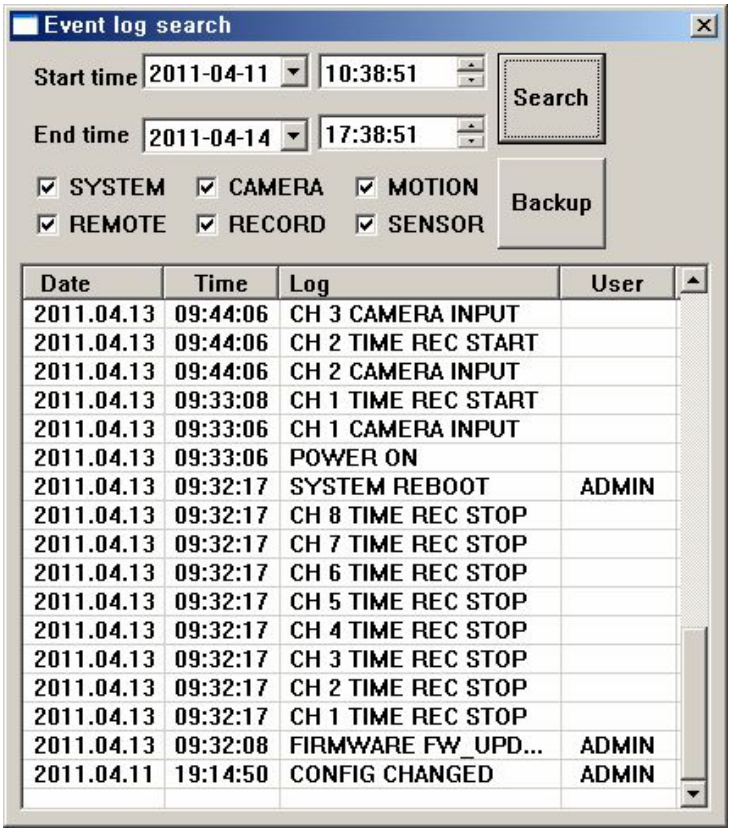
NO	Explanation
1	The screen of replay
2	Search bar : Search & indicate camera recording situation by time bar
3	Replay time & date
4	Replay controller
5	Calendar :
6	Controls volume
7	Controls screen mode

1. Click ‘REPLAY’( ) button, SmartViewer changes to ‘REPLAY’ mode.
2. Select the date in calendar and time in search bar that you want to playback.
3. You can control replay via replay controller.

13. REMOTE CONTROL

• Function

⑤ Event Log


Event log search
Start time 2011-04-11 10:38:51
End time 2011-04-14 17:38:51
Search
SYSTEM CAMERA MOTION
REMOTE RECORD SENSOR
Backup
Date Time Log User
2011.04.13 09:44:06 CH 3 CAMERA INPUT
2011.04.13 09:44:06 CH 2 TIME REC START
2011.04.13 09:44:06 CH 2 CAMERA INPUT
2011.04.13 09:33:08 CH 1 TIME REC START
2011.04.13 09:33:06 CH 1 CAMERA INPUT
2011.04.13 09:33:06 POWER ON
2011.04.13 09:32:17 SYSTEM REBOOT ADMIN
2011.04.13 09:32:17 CH 8 TIME REC STOP
2011.04.13 09:32:17 CH 7 TIME REC STOP
2011.04.13 09:32:17 CH 6 TIME REC STOP
2011.04.13 09:32:17 CH 5 TIME REC STOP
2011.04.13 09:32:17 CH 4 TIME REC STOP
2011.04.13 09:32:17 CH 3 TIME REC STOP
2011.04.13 09:32:17 CH 2 TIME REC STOP
2011.04.13 09:32:17 CH 1 TIME REC STOP
2011.04.13 09:32:08 FIRMWARE FW_UPD... ADMIN
2011.04.11 19:14:50 CONFIG CHANGED ADMIN

1. Click ‘EVENT LOG’( ) button, ‘Event Log Search’ window appears.
2. Set Start and End time for search.
3. Select event for search.
4. Click ‘Search’ button, event log is displayed.
5. If you want to save the event log, click ‘Backup’ button.

※ The Event log files will save in the elog files folder.
(.\SmartViewer\bakcup\elog\ )
The file format of the backup data is “txt”.

13. REMOTE CONTROL

What is Web Viewer?

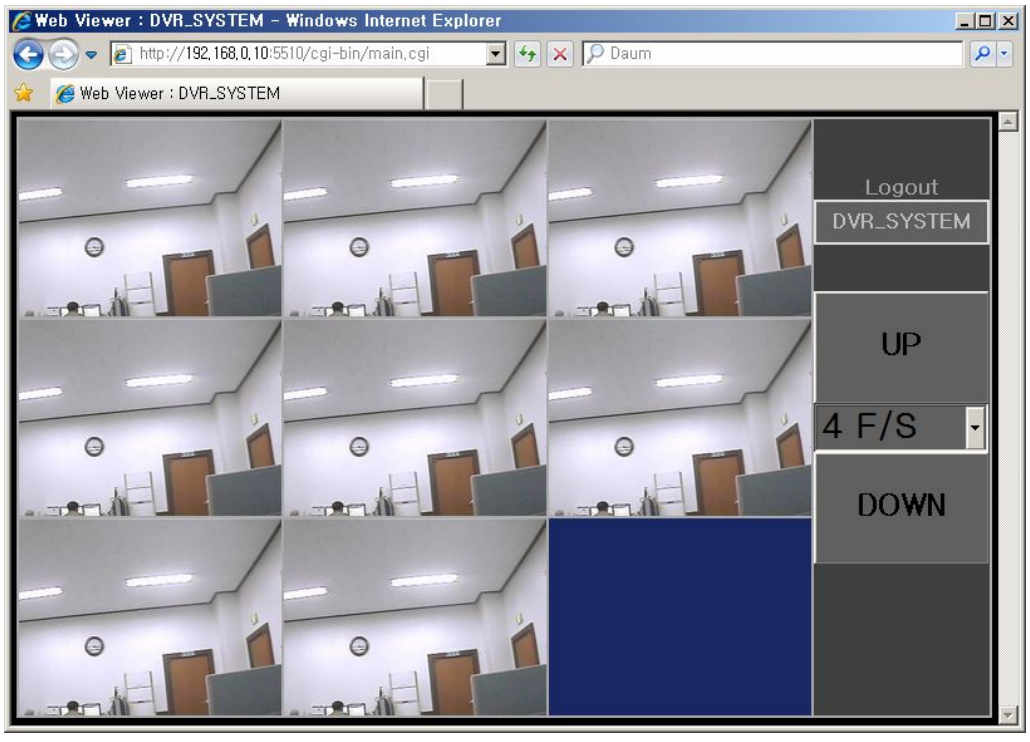
Web Viewer allows remote access to your DVR.
You can access to live video, archived video, PTZ control etc.

DVR FEATURES

- Remote access from a standard browser
  Example: Explorer, Opera, Chrome, Firefox, Safari, etc
- Supports 1, 4, 8 camera viewing formats.
- Control function for refresh time.

Connecting method

1. Open the web browser and input DVR IP to address window, then Enter.
   The login screen displays on the web browser.
2. Input DVR's ID and Password, then click **<LOGIN>** button.
   The DVR screen will be displayed on the web browser.
3. If you click one channel, the channel will be displayed as full screen.
   The split screen will be displayed after one more click.
4. You can control the refresh time by using the F/S control.
   If communication speed is slow, reduce the F/S in order to get images steadily.
   If communication speed is good, increase the F/S for smooth images.



13. REMOTE CONTROL

Connecting the Smartphone

• The connection method is same as web browser.

1. Open the web browser and input DVR IP to address window, then Enter.
   The login screen displays on the web browser.
2. Input DVR's ID and Password, then click **<LOGIN>** button.
   The DVR screen will be displayed on the web browser.
2. If you click one channel, the channel will be displayed as full screen.
   The split screen will be displayed after one more click.
3. You can control the refresh time by using the F/S control.
   If communication speed is slow, reduce the F/S in order to get images steadily.
   If communication speed is good, increase the F/S for smooth images.